재미있는

Basic Computer Games 2

Microcomputer Edition



지 경 사

머 리 말

오늘날의 마이크로 컴퓨터의 발전에는 참으로 감탄하지 않을 수 없읍니다.

우리 나라에서 발매되고 있는 것만도 꽤 여러 기종이 있고, 그 기능도 해마다 강화되고 있읍니다. 이와 같이 많은 종류의 마이크로 컴퓨터가 발매되고, 그에 따라 컴퓨터 사용자의 수도 날로 늘어가고 있는 가운데, 유감스럽게도 그 가치를 살리는 프로그램은 충분히 공급되고 있지 못하는 실정입니다.

그래서 본사는, 컴퓨터 사용자의, 프로그램에 대한 요구에 응하기 위해, 〈재미있는 BASIC 컴퓨터 게임 1〉에 이어 〈재미있는 BASIC 컴퓨터 게임 2〉를 기획하였읍니다.

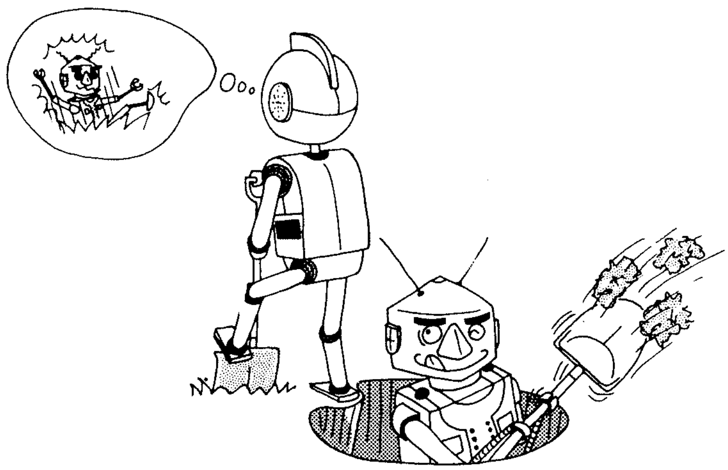
이 책은, 미국의 Creative Computing 사(社)에서 발행한 〈More Basic Computer Games〉의 한국어판이라 할 수 있는 것으로서, 우리 나라의 BASIC 컴퓨터에 맞도록 편역했읍니다.

이 책에는, 일반적으로 컴퓨터의 메인 콘소울(main console) 만으로 즐길 수 있는 대부분의 게임이 갖추어져 있읍니다.

원서에 수록되어 있는 게임 중, 우리 나라 사람들이 이해하기 어려운 룰의 몇 가지 게임은 뺐읍니다.

자아, 그럼 게임을 즐겨 주십시오!

Contents



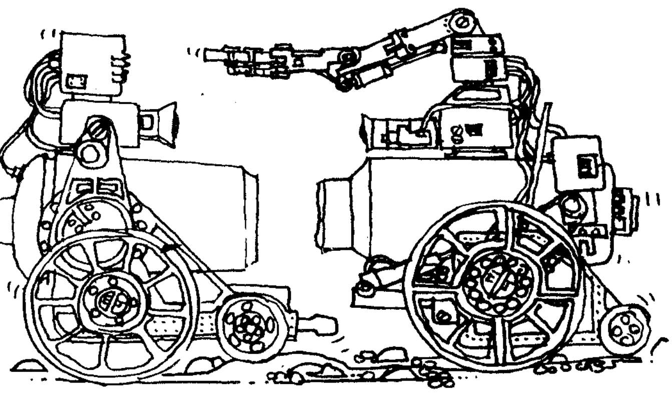
Artillery 3 (대포 게임)

두 사람 내지 세 사람이 함께 하는 게임이다. 각 플레이어(player)에게 Artillery(대포)가 주어져, 서로 다른 플레이어를 공격한다. 각 플레이어의 거리와 포탄의 속도가 게임초에 설정되고, 플레이어가 발사 각도를 지시하여 발포한다.

세 사람이 함께 하는 경우에는, 두 적 중 어느 쪽을 공격할 것인가를 각자가 정할 수 있으므로, 플레이어 1(one)과 플레이어 3(three)가 협동하여 플레이어 2(two)를 공격할 수 있다. 세 플레이어 중에서 어느 하나가 격파되면, 남은 두 플레이어가 게임을 계속하여 서로를 공격한다.

그런데, 포탄 같은 시끄러운 것보다는 눈싸움 정도로 하는 쪽이 평화적이고 좋지 않을까? 어쨌든 오리지널 게임(original game)이 포탄전으로 되어 있어서, 여기에는 그대로 수록하였다.

This game was originally written by Mike Forman and further revised by N.E. Lyon and Brian West. It first appeared in *Creative Computing*, Jan/Feb 1976.



```
RUN
                         ARTILLERY 3
                      CREATIVE COMPUTING
                    MORRISTOWN, NEW JERSEY


WELCOME TO 'WAR3'. TWO OR THREE HUMANS MAY PLAY! 이 게임은
DO YOU WISH SOME ASSISTANCE? YES  두세 사람이 하는 게임입니다.

THIS IS A WAR GAME. TWO OR THREE PLAYERS ARE GIVEN
(THEORETICAL) CANNONS WITH WHICH THEY ATTEMPT TO SHOOT EACH
OTHER. THE PARAMETERS FOR DISTANCES AND MUZZLE VELOCITIES ARE
SET AT THE BEGINNING OF THE GAME. THE SHOTS ARE FIRED BY
GIVING A FIRING ANGLE, EXPRESSED IN DEGREES FROM HORIZONTAL

THE COMPUTER WILL KEEP TRACK OF THE GAME AND REPORT ALL
MOVES. A 'HIT' IS SCORED BY FIRING A SHOT WITHIN 5% OF THE
TOTAL DISTANCE FIRED OVER. GOOD LUCK


NO. OF PLAYERS? 3     몇 사람이 합니까?

DISTANCE (FT.)  1  TO  2 ? 1000   상대 거리는?
DISTANCE (FT.)  2  TO  3 ? 2000
DISTANCE (FT.)  3  TO  1 ? 2500


MUZZLE VELOCITY (FT./SEC.) OF  1 ? 300  포탄 속도는?
MUZZLE VELOCITY (FT./SEC.) OF  2 ? 350
MUZZLE VELOCITY (FT./SEC.) OF  3 ? 400
```

```
ROUND  1

PLAYER  1 SHOOTING AT? 3          플레이어 1은 어느 곳을 향해 쏘겠습니까?
FIRING ANGLE? 68                              발사 각도는?
 YOU UNDERSHOT BY  545.777  FEET.             545.777피트 못미친 곳에
                                              떨어졌습니다.
PLAYER  2 SHOOTING AT? 3
FIRING ANGLE? 79
 YOU UNDERSHOT BY  566.253  FEET.

PLAYER  3 SHOOTING AT? 1
FIRING ANGLE? 80.5
 YOU UNDERSHOT BY  872.861  FEET.


ROUND  2

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 70
 YOU OVERSHOT BY  808.207  FEET.        808.207피트 지나쳐 떨어졌습니다.

PLAYER  2 SHOOTING AT? 3
FIRING ANGLE? 84
 YOU UNDERSHOT BY  1204.37  FEET.

PLAYER  3 SHOOTING AT? 1
FIRING ANGLE? 73
 YOU OVERSHOT BY  294.324  FEET.


ROUND  3

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 60
 YOU OVERSHOT BY  1435.18  FEET.

PLAYER  2 SHOOTING AT? 3
FIRING ANGLE? 70
 YOU OVERSHOT BY  460.307  FEET.

PLAYER  3 SHOOTING AT? 1
FIRING ANGLE? 76
 YOU UNDERSHOT BY  153.305  FEET.


ROUND  4

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 74
 YOU OVERSHOT BY  490.028  FEET.

PLAYER  2 SHOOTING AT? 3
FIRING ANGLE? 73
 YOU OVERSHOT BY  140.66  FEET.

PLAYER  3 SHOOTING AT? 1
FIRING ANGLE? 72
 YOU OVERSHOT BY  438.912  FEET.
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ROUND  5

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 76.5
 YOU OVERSHOT BY  276.044  FEET.

PLAYER  2 SHOOTING AT? 3
FIRING ANGLE? 75
 A HIT -  3  IS DEFUNCT.


ROUND  6

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 78
 YOU OVERSHOT BY  143.826  FEET.

PLAYER  2 SHOOTING AT? 1
FIRING ANGLE? 78
 YOU OVERSHOT BY  557.79  FEET.


ROUND  7

PLAYER  1 SHOOTING AT? 2
FIRING ANGLE? 79.4
 A HIT -  2  IS DEFUNCT.     명중.

GAME OVER.  1  WINS.         게임은 끝났읍니다.
OK
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```
8 PRINT TAB( 24);"ARTILLERY 3"
9 PRINT TAB( 20);"CREATIVE COMPUTING"
10 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
11 PRINT:PRINT:PRINT
20 T=0
60 DIM V(3),X(3),P(3),R(3,3)
70 FOR I=0 TO 3:V(I)=0:X(I)=0:P(I)=0:NEXT I
80 FOR I=0 TO 3:FOR J=0 TO 3
90 R(I,J)=0
100 NEXT J:NEXT I
110 DATA 1,2,2,3,3,1,1,3,3,2,2,1,2,3,3,1,1,2,0
120 PRINT "WELCOME TO 'WAR3'.  TWO OR THREE HUMANS MAY PLAY!"
130 PRINT "DO YOU WISH SOME ASSISTANCE";
140 INPUT A$
150 IF LEFT$(A$,1)="Y" THEN 1310
160 PRINT ""
170 PRINT "NO. OF PLAYERS";
180 INPUT N
190 IF N=2 THEN 240
200 IF N=3 THEN 270
210 PRINT "ERROR--TWO OR THREE PLAYERS!"
220 PRINT
230 GOTO 160
240 N1=1
250 PRINT ""
260 GOTO 290
270 N1=N
280 PRINT ""
290 FOR J=1 TO N1
300 READ A,B
310 PRINT "DISTANCE (FT.) ";A;" TO ";B;
320 INPUT R(A,B)
330 R(B,A)=R(A,B)
340 NEXT J
350 PRINT ""
360 RESTORE
370 IF N=2 THEN 460
380 FOR J=1 TO N
390 READ A,B,C,D,E,F
400 IF R(A,B)<R(C,D)+R(E,F) THEN 440
410 PRINT "ERROR--ILLEGAL TRIANGLE. RE-ENTER RANGES."
420 RESTORE
430 GOTO 290
440 NEXT J
450 PRINT
460 FOR J=1 TO N
470 PRINT "MUZZLE VELOCITY (FT./SEC.) OF ";J;
480 INPUT V(J)
490 NEXT J
500 PRINT ""
510 FOR J=1 TO N
520 X(J)=V(J)^2/32
530 NEXT J
540 FOR A=1 TO N
550 FOR B=1 TO N
560 IF X(A)>R(A,B) THEN 610
570 PRINT "ERROR--";A;" CANNOT REACH ";B
580 PRINT "WHAT IS THE MUZZLE VELOCITY OF ";A;
590 INPUT V(A)
600 GOTO 510
610 NEXT B
620 NEXT A
630 N1=N
640 PRINT ""
650 PRINT ""
660 PRINT "ROUND ";T+1
670 PRINT
680 FOR M=1 TO N
690 IF N=3 THEN 750
700 C=1
710 IF M<> 1 THEN 730
720 C=2
730 PRINT "PLAYER";M;"SHOOTING AT";C
740 GOTO 890
750 IF P(M)=12 THEN 1280
760 PRINT "PLAYER";M;"SHOOTING AT";
770 INPUT C
780 ON C GOTO 830,830,830
810 PRINT "ERROR--PLAYERS DESIGNATED 1,2,3."
820 GOTO 760
830 IF C<> M THEN 860
840 PRINT "ERROR--CANNOT SHOOT SELF."
850 GOTO 760
860 IF P(C) <> 12 THEN 890
870 PRINT "ERROR --";C;"IS DEFUNCT."
880 GOTO 760
890 PRINT "FIRING ANGLE";
900 INPUT A3
910 IF A3<0 THEN 940
920 IF A3>180 THEN 940
930 GOTO 970
940 PRINT "ERROR -- FIRED INTO GROUND. ";M;"NOW DEFUNCT."
950 P(M)=12
960 GOTO 760
970 IF A3<90 THEN 1000
980 PRINT "ERROR -- FIRED WRONG WAY, LOSE SHOT."
990 GOTO 760
1000 Z=SIN(A3*.0349064)*V(M)^2/32
1010 X=(R(M,C)/1000*RND(1))-(R(M,C)/1000*RND(1))
1020 D=X+Z
1030 D1=R(M,C)*.05
1040 IF D<D1 THEN 1080
1050 IF ABS(D-R(M,C))<D1 THEN 1110
1060 IF D<R(M,C) THEN 1140
1070 IF D>R(M,C) THEN 1160
1080 PRINT "TOO CLOSE --";M;"IS DEFUNCT."
1090 P(M)=12
1100 GOTO 1180
1110 PRINT "A HIT --";C;"IS DEFUNCT."
1120 P(C)=12
1130 GOTO 1180
1140 PRINT "YOU UNDERSHOT BY";ABS(D-R(M,C));"FEET."
1150 GOTO 1270
1160 PRINT "YOU OVERSHOT BY";ABS(D-R(M,C));"FEET."
1170 GOTO 1270
1180 N1=N1-1
1190 IF N1>1 THEN 1270
1200 FOR M1=1 TO N
1210 IF P(M1)=12 THEN 1250
1220 PRINT
1230 PRINT "GAME OVER. ";M1;"WINS."
1240 GOTO 1430
1250 NEXT M1
1260 STOP
1270 PRINT ""
1280 NEXT M
1290 T=T+1
1300 GOTO 650
1310 PRINT
1320 PRINT "THIS IS A WAR GAME.  TWO OR THREE PLAYERS ARE GIVEN"
1330 PRINT "(THEORETICAL) CANNONS WITH WHICH THEY ATTEMPT TO SHOOT EACH"
1340 PRINT "OTHER.  THE PARAMETERS FOR DISTANCES AND MUZZLE VELOCITIES ARE"
1350 PRINT "SET AT THE BEGINNING OF THE GAME.  THE SHOTS ARE FIRED BY"
1360 PRINT "GIVING A FIRING ANGLE, EXPRESSED IN DEGREES FROM HORIZONTAL."
1370 PRINT
1380 PRINT "THE COMPUTER WILL KEEP TRACK OF THE GAME AND REPORT ALL"
1390 PRINT "MOVES. A 'HIT' IS SCORED BY FIRING A SHOT WITHIN 5% OF THE"
1400 PRINT "TOTAL DISTANCE FIRED OVER.  GOOD LUCK!"
1410 PRINT ""
1420 GOTO 160
1430 END
```

Baccarat (배커라)

배커라(Baccarat ——— chemin de fer family)는, 1830년대 프랑스의 카지노에서부터 비롯되었다. 오늘날에는, 유럽으로부터 미국에 전해져 성행하여, 다시 유럽으로 역수출되어, 카지노를 통해 세계적으로 보급되었다. 이와 같이 전해지는 과정에서 배커라의 룰(rull)이 다양하게 바뀌어, 어떤 카지노에서 'Baccarat'라고 불리는 게임이, 다른 카지노에서는 'Chemin de fer'에 가까운 게임으로 되어 있다.

여기에 수록한 게임은, 배커라보다는 일반적으로 'Chemin de fer'로서 통용되고 있는 것에 더 가까운 게임이다. 게임의 룰을 간단히 설명하면 다음과 같다.

카드를 잘 섞어 여덟으로 나누어 늘어놓는다. 그 하나하나를 슈(shoe)라 부르는데, 그 중에서 카드 한 장을 뽑아내게 되어 있다. 게임이 시작되면, 각 플레이어는 뱅크(Bank)에 자기가 원하는 만큼의 돈을 거는데, 딜러(뱅커)의 오른쪽에 있는 것부터 차례로 걸어 간다. 다음 플레이어는, 앞서 돈을 건 사람의 뱅크가 아니라면 어떤 뱅크에든 돈을 걸 수 있다. 모든 뱅크에 돈을 걸거나, 플레이어 모두가 원하는 곳에 돈 거는 것이 끝날 때까지 계속한다. 플레이어가 "BANCO(뱅코)"라고 선언하면, 모든 뱅크를 획득할 수 있다. 단, 두 사람 이상의 플레이어가 "BANCO"라고 선언한 경우에는, 딜러의 오른쪽에서 가까운 플레이어가 우선권을 갖는다.

돈 걸기가 끝나면, 딜러는 가지고 있는 카드를 2장씩 2번 나눌 수 있다. 맨 처음의 카드는 딜러(뱅커)의 상대가 된 플레이어에게 돌리고, 또 한 장은 딜러의 것이 된다. 뱅커에 대해 가장 돈을 많이 건 플레이어는 대항 수단을 쓸 수가 있다.

이 게임에서는, 자기가 가지고 있는 카드(2장 내지 3장)의 합계가 9에 가까운 쪽이 이긴다. 단, 그림이 있는 카드, 에이스, 10의 카드는 0으로 계산한다. 또, 합한 수의 10자리 수는 무시한다. 즉, 7과 9의 카드의 합계는, 16이 아니고 6으로 계산한다.

맨 처음의 2장으로 내추럴(natural)인 8이나 9(2장의 합이 8이나 9)가 나오면, 그것이 그 플레이어가 가지는 카드가 된다. 가진 카드가 내추럴인 경우에는 승리하게 된다(물론 내추럴 9는 내추럴 8을 이긴다). 내추럴로 같은 수인 경우에는 무승부로, 카드를 다시 나눈다. 내추럴로 승부가 결정되지 않는 경우에는, 딜러는 상대 플레이어의 요구에 의해 카드를 다시 나누어야 한다. 상대 플레이어가 요구하지 않아도, 딜러는 카드를 다시 나누어야 한다. 상대 플레이어는 카드의 합계가 6이나 7인 경우에는 그대로 있고, 0, 1, 2, 3일 경우에는 카드를 뽑는다. 5일 경우에는, 그대로 가져도 좋고, 카드를 뽑아도 좋다. 뽑은 카드는 펴 놓는다. 그 결과를 보고 딜러는 카드를 뽑을지 안 뽑을지를 결정한다.

어느 플레이어든 카드는 한 장밖에 추가할 수 없다. 즉, 최고 3장의 카드밖에 가질 수 없는 것이다. 새로운 카드를 모두 나눈 다음, 일제히 카드를 편다. 합한 수가 모두 같으면, 다시 돈을 걸고 새로 시작한다. 상대 플레이어로서 딜러를 이긴 플레이어는 딜러의 권리를 빼앗을 수 있다.

Chemin de fer와 Baccarat의 차이는, 딜러의 역할을, 전자의 경우, 이긴 플레이어가 하는 데 대해, 후자의 경우는 그렇지 않다는 점이다.

IF BANKER GIVES	BANKER STANDS ON	BANKER DRAWS TO
Face card or ten	4, 5, 6, 7	3, 2, 1, 0
Nine	4, 5, 6, 7 (or 3)	2, 1, 0 (or 3)
Eight	3, 4, 5, 6, 7	2, 1, 0
Seven or six	7	6, 5, 4, 3, 2, 1, 0
Five or four	6, 7	5, 4, 3, 2, 1, 0
Three or two	5, 6, 7	4, 3, 2, 1, 0
Ace	4, 5, 6, 7	3, 2, 1, 0
Opponent stands	6, 7	5, 4, 3, 2, 1, 0

```
RUN
                         BACRAT
                   CREATIVE COMPUTING
                 MORRISTOWN, NEW JERSEY


BACCARAT -- CHEMIN DE FER

DO YOU NEED INSTRUCTIONS? YES
   BACCARAT IS A VERY POPULAR GAME IN LAS
VEGAS.  THE PLAYER AND BANKER EACH RECEIVE
TWO CARDS FROM A 'SHOE' CONTAINING 8 DECKS
OF CARDS.   ALL CARD COMBINATIONS TOTALING
TEN ARE NOT COUNTED.  THE ONE THAT ENDS UP
CLOSER TO NINE WINS.  THE STAKES ARE HIGH,
ALL OF THE PLAYERS START WITH TEN THOUSAND
DOLLARS.  YOU CAN BET ON THE DEALER OR THE
PLAYER.   A THIRD CARD IS GIVEN ONLY UNDER
CERTAIN CONDITIONS, AS YOU WILL SEE.   LET
US BEGIN.       GOOD LUCK!


HOW MANY PLAYERS? 1        플레이어는 몇 사람입니까?
WHAT IS THE NAME OF PLAYER 1 ? STEVE 플레이어 이름은?
STEVE HAS $ 10000 .   BET? 500   스티브는 10000 달러 있읍니다. 얼마를 걸겠는가?
(1) BANKER OR (2) PLAYER? 1

BANKER (뱅커)          PLAYER (플레이어)
FOUR OF SPADES         FOUR OF SPADES
EIGHT OF HEARTS        NINE OF DIAMONDS
PLAYER MUST DRAW.  플레이어가 카드를 뽑습니다.
ACE OF SPADES
PLAYER CANNOT DRAW.
PLAYERS TOTAL: 4   플레이어의 합계는 4

BANKER MUST DRAW.  뱅커가 카드를 뽑습니다.
FIVE OF DIAMONDS
BANKERS TOTAL: 7   뱅커의 합계는 7

BANKER WINS!!      뱅커의 승리!
STEVE WINS $ 500 , FOR A TOTAL OF $ 10500 .
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---------- NEW GAME ----------

STEVE HAS $ 10500 .   BET? 1000
(1) BANKER OR (2) PLAYER? 2

BANKER                  PLAYER
FOUR OF CLUBS           FOUR OF DIAMONDS
KING OF HEARTS          SEVEN OF SPADES
PLAYER MUST DRAW.
TWO OF HEARTS
PLAYER CANNOT DRAW.
PLAYERS TOTAL: 3

BANKER MUST DRAW.
KING OF DIAMONDS
BANKERS TOTAL: 4

BANKER WINS!!
STEVE LOSES $ 1000 , FOR A TOTAL OF $ 9500 .

---------- NEW GAME ----------

STEVE HAS $ 9500 .   BET? 9400
(1) BANKER OR (2) PLAYER? 2

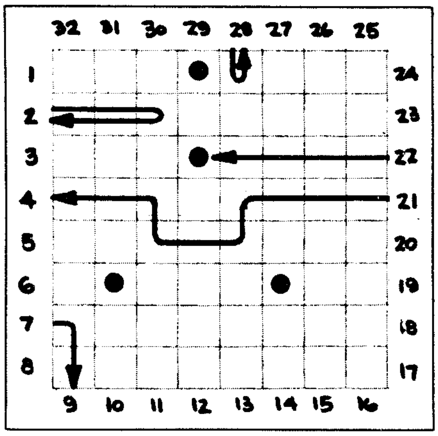
BANKER                  PLAYER
TWO OF CLUBS            JACK OF CLUBS
JACK OF DIAMONDS        FIVE OF CLUBS
PLAYER MUST DRAW.
JACK OF HEARTS
PLAYER CANNOT DRAW.
PLAYERS TOTAL: 5

BANKER MUST DRAW.
THREE OF DIAMONDS
BANKERS TOTAL: 5

IT'S A TIE.  THE HAND IS PLAYED OVER.
STEVE HAS $ 9500 .   BET? 9400
(1) BANKER OR (2) PLAYER? 2
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10 PRINT TAB( 26);"BACRAT"
20 PRINT TAB( 20);"CREATIVE COMPUTING"
30 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY":PRINT:PRINT:PRINT
40 PRINT"BACCARAT -- CHEMIN DE FER"
50 PRINT
60 PRINT"DO YOU NEED INSTRUCTIONS";
70 INPUT Q$
80 IF LEFT$(Q$,1)<>"Y" THEN 210
90 PRINT:PRINT"    BACCARAT IS A VERY POPULAR GAME IN LAS"
100 PRINT"VEGAS.  THE PLAYER AND BANKER EACH RECEIVE"
110 PRINT"TWO CARDS FROM A 'SHOE' CONTAINING 8 DECKS"
120 PRINT"OF CARDS.   ALL CARD COMBINATIONS TOTALING"
130 PRINT"TEN ARE NOT COUNTED.  THE ONE THAT ENDS UP"
140 PRINT"CLOSER TO NINE WINS.  THE STAKES ARE HIGH."
150 PRINT"ALL OF THE PLAYERS START WITH TEN THOUSAND"
160 PRINT"DOLLARS.  YOU CAN BET ON THE DEALER OR THE"
170 PRINT"PLAYER.   A THIRD CARD IS GIVEN ONLY UNDER"
180 PRINT"CERTAIN CONDITIONS, AS YOU WILL SEE.   LET"
190 PRINT"US BEGIN.      GOOD LUCK!"
200 PRINT
210 DIM M(20),F1(20),F(20),B$(13),V(13),G$(20)
220 DIM Z(9,10),Q(4,13)
240 FOR X=3 TO 6
250 FOR Y=1 TO 10
260 READ Z(X,Y)
270 NEXT Y,X
280 FOR S1=1 TO 10:READ  W(S1):NEXT
283 FOR S1=1 TO 4:READ A$(S1):NEXT
285 FOR S1=1 TO 13:READ B$(S1):NEXT
287 FOR S1=1 TO 13:READ V(S1):NEXT
290 PRINT
300 PRINT"HOW MANY PLAYERS";
310 INPUT P1
315 PRINT
320 FOR J=1 TO P1
330 PRINT"WHAT IS THE NAME OF PLAYER"J;
340 INPUT G$(J)
350 M(J)=10000
360 NEXT J
365 PRINT
370 FOR S1=1 TO 4
373 FOR S2=1 TO 13
375 Q(S1,S2)=0
377 NEXT S2
379 NEXT S1
380 FOR J=1 TO 6
390 C=INT(1+RND(1)*4)
400 D=INT(1+RND(1)*13)
410 Q(C,D)=Q(C,D)+1
420 IF Q(C,D)>=32 THEN 390
430 B(J)=V(D)
440 C$(J)=B$(D)+" OF "+A$(C)
450 NEXT J
460 W1=2
470 FOR J=1 TO P1
480 IF M(J)<1 THEN 580
490 PRINT G$(J)" HAS "; :PRINT USING "$$##,###";M(J); :PRINT ".   BET";
500 INPUT F(J)
510 IF F(J)>M(J) THEN 490
520 IF F(J)<>INT(F(J)) THEN 490
530 IF F(J)<1 THEN 490
540 PRINT"(1) BANKER OR (2) PLAYER";
550 INPUT F1(J)
560 IF F1(J)>=1000 THEN 490
570 IF (F1(J)-1)*(F1(J)-2)<>0 THEN 540
575 PRINT
580 NEXT J
590 J=0
600 T1=B(1)+B(2)
610 T2=B(3)+B(4)
620 PRINT
630 PRINT"BANKER"TAB( 20)"PLAYER"
635 PRINT"------"TAB( 20)"------"
640 PRINT C$(3)TAB( 20)C$(1)
650 PRINT C$(4)TAB( 20)C$(2)
655 PRINT
660 IF T1<10 THEN 680
670 T1=T1-10
680 IF T2<10 THEN 700
690 T2=T2-10
700 IF W(T1+1)=0 THEN 770
710 PRINT"PLAYER MUST DRAW."
720 PRINT C$(5)
730 T1=T1+B(5)
740 IF T1<10 THEN 770
750 T1=T1-10
760 GOTO 790
770 PRINT"PLAYER CANNOT DRAW."
780 J=11
790 PRINT"PLAYERS TOTAL:"T1
800 PRINT
810 IF T2<3 THEN 870
820 IF T2>6 THEN 930
830 IF J<>11 THEN 860
840 IF T2=6 THEN 930
850 GOTO 870
860 IF Z(T2,B(5)+1)=0 THEN 930
870 PRINT"BANKER MUST DRAW."
880 PRINT C$(6)
890 T2=T2+B(6)
900 IF T2<10 THEN 920
910 T2=T2-10
920 GOTO 940
930 PRINT"BANKER CANNOT DRAW."
940 PRINT"BANKERS TOTAL:"T2
950 PRINT
960 IF T2<>T1 THEN 990
970 PRINT"IT'S A TIE.  THE HAND IS PLAYED OVER."
980 GOTO 380
990 IF T2<T1 THEN 1030
1000 W1=1
1010 PRINT"BANKER WINS!!"
1020 GOTO 1040
1030 PRINT"PLAYER WINS!!"
1040 FOR J=1 TO P1
1050 IF M(J)<=0 THEN 1130
1060 PRINT G$(J)" ";
1070 IF F1(J)=W1 THEN 1110
1080 M(J)=M(J)-F(J)
1090 PRINT"LOSES "; :PRINT USING "$$##,###";F(J); :PRINT ", FOR A TOTAL OF ";
1095 PRINT USING "$$#,###";M(J); :PRINT "."
1100 GOTO 1130
1110 M(J)=M(J)+F(J)
1120 PRINT"WINS "; :PRINT USING "$$##,###";F(J); :PRINT ", FOR A TOTAL OF ";
1125 PRINT USING "$$#,###";M(J); :PRINT "."
1130 NEXT J
1140 FOR J=1 TO P1
1150 IF M(J)<>0 THEN 1190
1160 NEXT J
1170 PRINT"THANK YOU FOR YOUR MONEY, AND ";
1180 GOTO 1320
1190 PRINT
1200 PRINT"---------- NEW GAME ----------"
1210 PRINT
1220 FOR X=1 TO 4
1230 FOR Y=1 TO 1
1240 IF Q(X,Y)<>0 THEN 380
1250 NEXT Y,X
1260 GOTO 370
1270 DATA 1,1,1,1,1,1,1,1,0,1,0,0,1,1,1,1,1,1,0,0
1280 DATA 0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,1,1,0,0
1290 DATA 1,1,1,1,1,1,0,0,0,0,SPADES,HEARTS,DIAMONDS
1300 DATA CLUBS,ACE,TWO,THREE,FOUR,FIVE,SIX,SEVEN,EIGHT
1310 DATA NINE,TEN,JACK,QUEEN,KING,1,2,3,4,5,6,7,8,9,0,0,0,0
1320 PRINT"THANK YOU FOR PLAYING."
1330 END
```

Blackbox (블랙 박스)



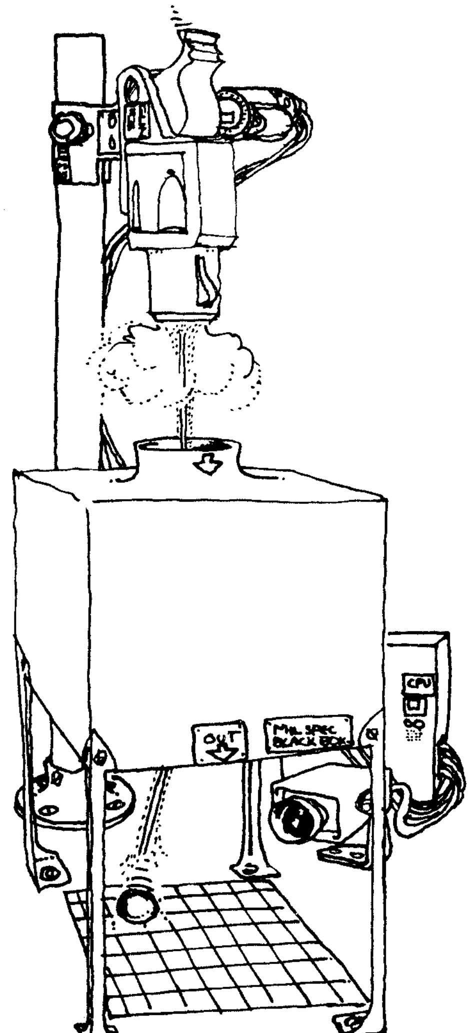
이 게임은, 'Games and Puzzles'지(誌) 1977년 8월호에 실린 것을 컴퓨터용으로 프로그램한 것이다. 블랙 박스란, 8×8의 격자 안에 원자가 숨어 있는 상자이다. 이 게임은, 빛을 비추었을 때 생기는 회절(回折), 반사, 흡수 등에 의해, 어디에 원자가 있는지 알아맞히는 게임이다. 빛을 비추는 위치는 박스의 가장자리로서, 1부터 32까지의 일련 번호가 붙어 있다.

먼저, 당신은 박스 안에 몇 개의 원자를 넣을 것인가를 결정한다. 그런 다음, 빛을 비추는 위치를 지정(입력)하면, 광선이 회절되었는지, 반사되었는지, 또는 흡수되었는지의 결과가 출력된다. 빛은 다음의 규칙에 따라 운동한다.

(1) 빛이 직접 원자에 닿으면 흡수된다.
(2) 원자 위치의 이웃 구역(section)에 온 빛은 90° 회절된다(만약 그 앞에 다음 원자가 있으면, 같은 현상이 계속해서 일어난다).
(3) 두 원자 사이의 구역에서는 반사된다.
(4) 박스의 가장자리에 원자가 있으면, 가장자리로부터 들어오는 빛은 반사된다.
(5) 그 밖의 경우는 직진한다.

이 게임은, 원자가 4~5개 정도 있을 때에는 매우 재미있지만, 원자 수가 너무 많아지면 아주 어려워진다. 경우에 따라서는, 한 원자가 다른 원자에 의해 덮여 버릴 수도 있다. 또, 원자가 어느 곳에 있는지 판별할 수 없는 경우도 있을 수 있다(물론 이런 경우가 흔하지는 않다. 이런 경우에는 짐작만 할 수 있다). 이 게임으로 경기를 할 경우에는, 점수를 계산할 때, 반사, 흡수인 경우에는 1점, 박스로부터 빛이 나온 경우(박스를 빛이 통과한 경우)는 2점, 원자 위치를 틀리면 5점으로 한다.

This program and description were written by Jeff Kenton. A previous version appeared in *Creative Computing*, May/Jun 1978.



```
RUN
                         BLACKBOX
                    CREATIVE COMPUTING
                  MORRISTOWN, NEW JERSEY


NO. OF ATOMS? 4
RAY? 1        광선의 번호는?
ABSORBED   흡수되었읍니다.
RAY? 2
ABSORBED
RAY? 3
TO 22     22에서 나왔읍니다.
RAY? 31
REFLECTED   반사되었읍니다.
RAY? 4
TO 32
RAY? 28
TO 13
RAY? 26
ABSORBED
RAY? 7
ABSORBED
RAY? 8
TO 15
RAY? 0
NOW TELL ME, WHERE DO YOU THINK THE ATOMS ARE? 원자가 어느 곳에 있다고
(IN ROW,COLUMN FORMAT PLEASE.)            생각합니까?(가로, 세로의 순으로.)
ATOM #  1 ? 4,3
ATOM #  2 ? 1,1
ATOM #  3 ? 2,7
ATOM #  4 ? 7,8

 . . * . . . . .
 . . . . . . . .
 . . . . . . . .
 . . . . . . . .
 . * . . . . * .
 . . . . . . . .
 . . . . . . . *
 . . . . . . . .

YOU GUESSED  1  OUT OF  4  ATOMS CORRECTLY!! 4개 중에서 하나가 정답입니다.
YOUR SCORE FOR THIS ROUND WAS  28  POINTS. 당신의 득점은 28점.
CARE TO TRY AGAIN? YES   다시 한 번 하겠읍니까?

NO. OF ATOMS? 4
RAY? 4
TO 13
RAY? 25
ABSORBED
RAY? 23
TO 26
RAY? 19
TO 6
RAY? 26
TO 23
RAY? 17
ABSORBED
RAY? 31
TO 1
RAY? 3
TO 18
RAY? 0
NOW TELL ME, WHERE DO YOU THINK THE ATOMS ARE?
(IN ROW,COLUMN FORMAT PLEASE.)
ATOM #  1 ? 8,1
ATOM #  2 ? 2,3
ATOM #  3 ? 4,7
ATOM #  4 ? 8,8

 . . . . . . . .
 . . * . . . . .
 . . . . . * . .
 . . . . . . . *
 . . . . . . . .
 . . . . . . . .
 . . . . . . . .
 * . . . . . . .

YOU GUESSED  2  OUT OF  4  ATOMS CORRECTLY!!
YOUR SCORE FOR THIS ROUND WAS  24  POINTS.
CARE TO TRY AGAIN? NO
Ok
```

```
100 PRINT TAB( 25);"BLACKBOX"
110 PRINT TAB( 20);"CREATIVE COMPUTING"
120 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 PRINT:PRINT:PRINT
140 DEF FN R(Z)=INT(8*RND(1)+1)
150 PRINT "NO. OF ATOMS";: INPUT N
160 FOR J=0 TO 9: FOR I=0 TO 9: B(I,J)=0: NEXT I,J
170 FOR I=1 TO N
180 X=FN R(1): Y=FN R(1): IF B(X,Y)<>0 THEN 180
190 B(X,Y)=1: NEXT I
200 S=0:C=0
210 PRINT:PRINT "RAY";: INPUT R: IF R<1 THEN 480
220 ON INT((R-1)/8)+1 GOTO 240,250,260,270
230 PRINT "ERROR": GOTO 210
240 X=0: Y=R: U=1: V=0: GOTO 280
250 X=R-8: Y=9: U=0: V=-1: GOTO 280
260 X=9: Y=25-R: U=-1: V=0: GOTO 280
270 X=33-R: Y=0: U=0: V=1
280 X1=X+U: Y1=Y+V
290 IF U=0 THEN X2=X1-1: X3=X1+1: Y2=Y1: Y3=Y1: GOTO 310
300 Y2=Y1-1: Y3=Y1+1: X2=X1: X3=X1
310 ON 8*B(X1,Y1)+B(X2,Y2)+2*B(X3,Y3)+1 GOTO 330,340,350,340
320 PRINT "ABSORBED":S=S+1: GOTO 210
330 X=X1: Y=Y1: GOTO 380
340 Z=1: GOTO 360
350 Z=-1
360 IF U=0 THEN U=Z: V=0: GOTO 380
370 U=0: V=Z
380 ON INT((X+15)/8) GOTO 420,400,430
390 STOP
400 ON INT((Y+15)/8) GOTO 440,280,450
410 STOP
420 Z=Y: GOTO 460
430 Z=25-Y: GOTO 460
440 Z=33-X: GOTO 460
450 Z=8+X
460 IF Z=R THEN PRINT "REFLECTED":S=S+1: GOTO 210
470 PRINT "TO";Z: S=S+2:GOTO 210
480 PRINT:PRINT "NOW TELL ME, WHERE DO YOU THINK THE ATOMS ARE?"
490 PRINT "(IN ROW,COLUMN FORMAT PLEASE.)":PRINT
500 FOR Q=1 TO N
510 PRINT "ATOM #";Q;
520 INPUT I,J
530 IF B(J,I)<>1 THEN S=S+5:GOTO 540
532 B(J,I)=2
535 C=C+1
540 NEXT Q
550 PRINT: FOR J=1 TO 8: FOR I=1 TO 8
560 IF B(I,J)=0 THEN PRINT " .";: GOTO 580
570 PRINT " *";
580 NEXT I: PRINT: NEXT J: PRINT
590 PRINT "YOU GUESSED";C;"OUT OF";N;"ATOMS CORRECTLY!!"
600 PRINT "YOUR SCORE FOR THIS ROUND WAS";S;"POINTS."
605 PRINT
610 INPUT "CARE TO TRY AGAIN";A$
620 IF LEFT$(A$,1)="Y" THEN PRINT:GOTO 150
630 END
```

Bobstones(보브스톤)

"Watership Down"이라는 소설에 나오는 'Bobstones'라는 콘테스트에서 비롯된 이 게임은, 주사위를 던져 다음의 세 가지를 알아맞히는, 일종의 숫자놀이이다.

(1) 주사위 눈의 합이 짝수인지 홀수인지 알아맞히면——1점

(2) 주사위 눈의 합을 알아맞히면——2점

(3) 각 주사위 눈의 수를 알아맞히면——3점

먼저 11점을 얻는 쪽이 승리한다. 동점인 경우에는, 먼저 공격한 쪽이 진다.

This game was written by Dohn Addleman. It originally appeared in *Creative Computing* Mar/Apr 1976.

```
RUN
                            BOBSTONES
                        CREATIVE COMPUTING
                      MORRISTOWN, NEW JERSEY


    THIS IS A NUMBER GAME CALLED BOBSTONES.  THE OBJECT OF
BOBSTONES IS TO GUESS THREE THINGS ABOUT THE ROLL OF A PAIR
OF DICE.  ON EACH TURN, THE COMPUTER SIMULATES THE ROLL OF
THE DICE.  THEN, YOU OR THE COMPUTER (YOUR OPPONENT) GUESS

                    주사위의 합이 짝수인가 홀수인가.              SCORE
 1. IF THE SUM OF THE DICE IS ODD OR EVEN                  1 POINT
 2. THE SUM OF THE DICE   주사위의 합                      2 POINTS
 3. THE NUMBER ON EACH OF THE TWO DICE                     3 POINTS
                     각 주사위 눈의 수
    THE WINNER IS THE FIRST PLAYER TO SCORE 11 POINTS.  IF A
TIE RESULTS, THE WINNER IS THE FIRST PLAYER TO BREAK THE TIE.
    GOOD LUCK !


YOU FIRST OR ME? ME    누가 먼저 합니까?

YOUR TURN.   당신 차례
IS THE SUM ODD OR EVEN? ODD  짝수입니까, 홀수입니까?
SORRY, THE SUM IS 4 . 미안합니다. 눈의 합계는 4입니다.

MY TURN.   내 차례                              주사위 눈은 4와 4.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  4  AND  4 .
*** THE SUM IS  8 .    합계 8
MY GUESS IS THAT THE SUM IS EVEN.
AM I RIGHT OR WRONG? RIGHT
MY GUESS OF THE SUM IS  8
AM I RIGHT OR WRONG? RIGHT
MY GUESS IS THAT THE NUMBERS ARE  3  AND  5 .
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 3  - YOU 0 .  스코어는 내가 3, 당신이 0입니다.

YOUR TURN.
IS THE SUM ODD OR EVEN? ODD
SORRY, THE SUM IS 8 .


MY TURN.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  3  AND  3 .
*** THE SUM IS  6 .
MY GUESS IS THAT THE SUM IS EVEN.  내 추측으로는 짝수입니다.
AM I RIGHT OR WRONG? RIGHT  내가 맞습니까, 틀립니까?
MY GUESS OF THE SUM IS  12  내 추측으로는 합계는 12입니다.
AM I RIGHT OR WRONG? WQRONG    내가 맞습니까, 틀립니까?
/// TYPE THE WORD 'RIGHT' OR THE WORD 'WRONG'. 다시 한 번 제대로.
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 4  - YOU 0 .
              스코어는 4 : 0
YOUR TURN.
IS THE SUM ODD OR EVEN? EVEN
YOU ARE CORRECT.
NOW, GUESS THE SUM? 12
SORRY, THE SUM IS 10 .

MY TURN.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  2  AND  4 .
*** THE SUM IS  6 .
MY GUESS IS THAT THE SUM IS ODD.
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 4  - YOU 1 .

YOUR TURN.
IS THE SUM ODD OR EVEN? ODD
YOU ARE CORRECT.
NOW, GUESS THE SUM? 3
SORRY, THE SUM IS 9 .

MY TURN.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  1  AND  2 .
*** THE SUM IS  3 .
MY GUESS IS THAT THE SUM IS ODD.
AM I RIGHT OR WRONG? RIGHT
MY GUESS OF THE SUM IS  9
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 5  - YOU 2 .

YOUR TURN.
IS THE SUM ODD OR EVEN? ODD
SORRY, THE SUM IS 6 .

MY TURN.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  6  AND  2 .
*** THE SUM IS  8 .
MY GUESS IS THAT THE SUM IS ODD.
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 5  - YOU 2 .

YOUR TURN.
IS THE SUM ODD OR EVEN? EVEN
YOU ARE CORRECT.
NOW, GUESS THE SUM? 6
SORRY, THE SUM IS 4 .

MY TURN.
*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ARE  3  AND  4 .
*** THE SUM IS  7 .
MY GUESS IS THAT THE SUM IS ODD.
AM I RIGHT OR WRONG? RIGHT
MY GUESS OF THE SUM IS  11
AM I RIGHT OR WRONG? WRONG

THE SCORE IS ME 6  - YOU 3 .
```

EVEN ······ 짝수
ODD ······ 홀수
SUM ······ 눈의 합
GUESS ······ 추측

```
10 PRINT TAB( 24);"BOBSTONES"
20 PRINT TAB( 20);"CREATIVE COMPUTING"
30 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 PRINT:PRINT
140 PRINT "    THIS IS A NUMBER GAME CALLED BOBSTONES.  THE OBJECT OF"
150 PRINT "BOBSTONES IS TO GUESS THREE THINGS ABOUT THE ROLL OF A PAIR"
160 PRINT "OF DICE.  ON EACH TURN, THE COMPUTER SIMULATES THE ROLL OF"
170 PRINT "THE DICE.  THEN, YOU OR THE COMPUTER (YOUR OPPONENT) GUESS"
180 PRINT
190 PRINT "                                                   SCORE"
195 PRINT "                                                   -----"
200 PRINT " 1.  IF THE SUM OF THE DICE IS ODD OR EVEN         1 POINT"
210 PRINT " 2.  THE SUM OF THE DICE                           2 POINTS"
220 PRINT " 3.  THE NUMBER ON EACH OF THE TWO DICE            3 POINTS"
230 PRINT
240 PRINT "    THE WINNER IS THE FIRST PLAYER TO SCORE 11 POINTS.  IF A"
250 PRINT "TIE RESULTS, THE WINNER IS THE FIRST PLAYER TO BREAK THE TIE."
```

```
260 PRINT "    GOOD LUCK !"
270 DEF FN D(X)=INT(6*RND(1)+1)
280 DIM A(2)
290 LET A(1)=0
300 LET A(2)=0
310 LET Z1=-1
320 LET Z2=-1
330 LET Z3=-1
340 LET Z4=-1
350 LET Z5=-1
360 LET J1=0
370 PRINT
380 PRINT
390 PRINT "YOU FIRST OR ME";
400 INPUT Z$
405 Z$=LEFT$(Z$,1)
410 IF Z$="Y" THEN 450
420 IF Z$="M" THEN 450
430 PRINT "/// TYPE THE WORD 'YOU' OR THE WORD 'ME'."
440 GOTO 390
450 LET D1=FN D(Z1)
460 IF Z1=0 THEN 480
470 LET Z1=0
480 LET D2=FN D(0)
490 LET S=D1+D2
500 IF J1=0 THEN 650
510 IF Z$<>"M" THEN 580
520 IF J2<>0 THEN 1160
530 PRINT
540 PRINT "THE SCORE IS ME:";A(2);" - YOU:";A(1);CHR$(8);"."
550 IF A(1)>=11 THEN 1900
560 IF A(2)>=11 THEN 1900
570 GOTO 670
580 IF Z$<>"Y" THEN 2020
590 IF J2<>1 THEN 670
600 PRINT
610 PRINT "THE SCORE IS YOU:";A(1);" - ME:";A(2);CHR$(8);"."
620 IF A(1)>=11 THEN 1900
630 IF A(2)>=11 THEN 1900
650 LET J1=-1
660 IF Z$="Y" THEN 1160
670 PRINT
680 PRINT "YOUR TURN."
690 LET J2=1
700 LET R=S-(INT(S/2)*2)
710 PRINT "IS THE SUM ODD OR EVEN";
720 INPUT A$
725 A$=LEFT$(A$,1)
730 IF A$="O" THEN 770
740 IF A$="E" THEN 800
750 PRINT "/// TYPE THE WORD 'ODD' OR THE WORD 'EVEN'."
760 GOTO 710
770 IF R=1 THEN 820
780 PRINT "SORRY, THE SUM IS";S;CHR$(8);"."
790 GOTO 450
800 IF R=0 THEN 820
810 GOTO 780
820 PRINT "YOU ARE CORRECT."
830 LET A(1)=A(1)+1
840 PRINT "NOW, GUESS THE SUM";
850 INPUT G1
860 IF G1<2 THEN 890
870 IF G1>12 THEN 890
880 GOTO 910
890 PRINT "/// THE SUM MUST BE BETWEEN 2 AND 12."
900 GOTO 840
910 IF G1=S THEN 940
920 PRINT "SORRY, THE SUM IS";S;CHR$(8);"."
930 GOTO 450
940 PRINT "YOU ARE CORRECT."
950 LET A(1)=A(1)+2
960 PRINT "WHAT ARE THE TWO NUMBERS WHICH PRODUCED";S;
970 INPUT N1,N2
980 IF N1<1 THEN 1030
990 IF N2<1 THEN 1030
1000 IF N1>6 THEN 1030
1010 IF N2>6 THEN 1030
1020 GOTO 1050
1030 PRINT "/// THE NUMBERS MUST BE BETWEEN 1 AND 6."
1040 GOTO 960
1050 IF N1=D1 THEN 1090
1060 IF N2=D1 THEN 1110
1070 PRINT "SORRY, THE NUMBERS ARE";D1;"AND";D2;CHR$(8);"."
1080 GOTO 450
1090 IF N2=D2 THEN 1130
1100 GOTO 1070
1110 IF N1=D2 THEN 1130
1120 GOTO 1070
1130 PRINT "YOU ARE CORRECT."
1140 LET A(1)=A(1)+3
1150 GOTO 450
1160 LET J2=0
1170 PRINT
1180 PRINT "MY TURN."
1190 PRINT "*** ON THIS ROLL OF THE DICE, THE TWO NUMBERS ";
1195 PRINT "ARE";D1;"AND";D2;CHR$(8);"."
1200 PRINT "*** THE SUM IS";S;CHR$(8);"."
1210 LET A1=INT(2*RND(1)+1)
1220 IF Z2=0 THEN 1240
1230 LET Z2=0
1240 IF A1=1 THEN 1270
1250 PRINT "MY GUESS IS THAT THE SUM IS ODD."
1260 GOTO 1280
1270 PRINT "MY GUESS IS THAT THE SUM IS EVEN."
1280 PRINT "AM I RIGHT OR WRONG";
1290 INPUT D$
1295 D$=LEFT$(D$,1)
1300 IF D$="R" THEN 1340
1310 IF D$="W" THEN 450
1320 PRINT "/// TYPE THE WORD 'RIGHT' OR THE WORD 'WRONG'."
1330 GOTO 1280
1340 LET A(2)=A(2)+1
1350 IF A1=1 THEN 1410
1360 LET B1=INT(5*RND(1)+1)
1370 IF Z3=0 THEN 1390
1380 LET Z3=0
1390 LET B2=B1+B1+1
1400 GOTO 1430
1410 LET B1=FN D(0)
1420 LET B2=B1+B1
1430 PRINT "MY GUESS OF THE SUM IS";B2;CHR$(8);"."
1440 PRINT "AM I RIGHT OR WRONG";
1450 INPUT D$
1455 D$=LEFT$(D$,1)
1460 IF D$="R" THEN 1500
1470 IF D$="W" THEN 450
1480 PRINT "/// TYPE THE WORD 'RIGHT' OR THE WORD 'WRONG'."
1490 GOTO 1440
1500 LET A(2)=A(2)+2
1510 IF B2<>2 THEN 1550
1520 LET C1=1
1530 LET C2=1
1540 GOTO 1810
1550 IF B2<>3 THEN 1590
1560 LET C1=1
1570 LET C2=2
1580 GOTO 1810
1590 IF B2<>11 THEN 1630
1600 LET C1=5
1610 LET C2=6
1620 GOTO 1810
1630 IF B2<>12 THEN 1670
1640 LET C1=6
1650 LET C2=6
1660 GOTO 1810
1670 IF B2>7 THEN 1740
1680 LET K1=B2-1
1690 LET C1=INT(K1*RND(1)+1)
1700 IF Z4=0 THEN 1720
1710 LET Z4=0
1720 LET C2=B2-C1
1730 GOTO 1810
1740 LET K1=B2-6
1750 LET K3=K1-1
1760 LET K2=7-K1
1770 LET C1=(INT(K2*RND(1)+1)+K3)
1780 IF Z5=0 THEN 1800
1790 LET Z5=0
1800 LET C2=B2-C1
1810 PRINT "MY GUESS IS THAT THE NUMBERS ARE";C1;"AND";C2;CHR$(8);"."
1820 PRINT "AM I RIGHT OR WRONG";
1830 INPUT D$
1835 D$=LEFT$(D$,1)
1840 IF D$="R" THEN 1880
1850 IF D$="W" THEN 450
1860 PRINT "/// TYPE THE WORD 'RIGHT' OR THE WORD 'WRONG'."
1870 GOTO 1820
1880 LET A(2)=A(2)+3
1890 GOTO 450
1900 IF A(1)<>A(2) THEN 1930
1910 IF J2<>0 THEN 1160
1920 GOTO 670
1930 IF A(1)>A(2) THEN 2030
1940 PRINT
1950 PRINT "I WIN! ANOTHER GAME";
1960 INPUT C$
1965 C$=LEFT$(C$,1)
1970 IF C$="Y" THEN 290
1980 IF C$="N" THEN 2010
1990 PRINT "/// TYPE THE WORD 'YES' OR THE WORD 'NO'."
2000 GOTO 1960
2010 PRINT "SEE YOU LATER."
2020 END
2030 PRINT
2040 PRINT "YOU WIN! ANOTHER GAME";
2050 GOTO 1960
```

Bocce (보 치)

이 프로그램은, 'Lawn Bowling' 또는 'Bowling'이라 불리는 이탈리아의 보치 게임을 흉내낸 것이다. 이 프로그램을 실행하면, 1770행의 게임 설명부터 시작된다.

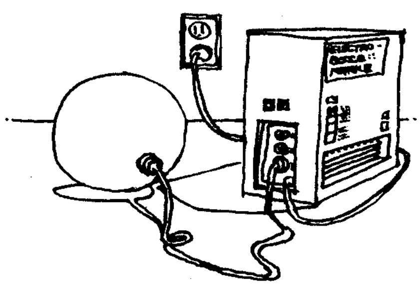
이 게임은 4개(Q=5)의 볼(Ball)을 가지고 하게 되어 있다. 볼의 수를 늘릴 수도 있지만(1000행의 Q 값을 늘린다), 그러면 볼의 충돌이 잦아, 각 볼의 위치를 계산하는 데에 시간이 많이 걸린다. 6~8개 정도까지의 볼을 사용한다면 비교적 시간이 걸리지 않으므로, 대개 그 정도 갯수의 볼로 게임을 한다. 따라서 Q의 값을 9까지 증가시킬 수 있는데, 이것은 1030행의 DIM문으로 지정한다.

잭(Jack)에 볼이 충돌하면 소리가 난다(1500행).

이 게임은, 잭에 스치게 하는 것을 목적으로 하고 있으므로, 잭을 쳐서는 안 된다는 점에 주의하기 바란다. 잭은 볼보다 작고 가볍기 때문에, 충돌하면 매우 빠른 속도로 날아가 버린다. 부주의한 숏이 실패의 큰 원인이 되는 것이다.

이 게임을 능숙하게 하기 위해서는, 얼마간의 상상력이 요구된다. 좌표축의 원점에 서서 X축 방향을 보고 있는 자신을 상상할 수 있다면, 게임은 대단히 쉬워진다.

This game and the description above were written by Victor Bendall of Eastern Kentucky University. It originally appeared in *Creative Computing*, Jul/Aug 1977.



```
RUN
                         BOCCE
                   CREATIVE COMPUTING
                 MORRISTOWN  NEW JERSEY

                                                    이 게임은 '로운 볼링'을
THIS GAME SIMULATES THE GAME OF LAWN BOWLS        } 흉내낸 것입니다.
DO YOU NEED INSTRUCTIONS? ENTER YES OR NO? YES    } 설명이 필요합니까?

IN THIS GAME YOU ROLL  4 BALLS SUCCESSIVELY AT A TARGET
BALL (CALLED A JACK). THE OBJECT IS TO GET THE BALLS AS CLOSE
TO THE JACK AS POSSIBLE.  THE BALLS ARE 10 CM IN DIAMETER AND
ARE WEIGHTED SO THAT THEY ROLL IN A CURVE. YOU WILL HAVE TO
ROLL THEM AT AN ANGLE TO THE LINE FROM YOU AT COORDINATES 0,0
TO THE JACK AT COORDINATES X,Y. A POSITIVE ANGLE WILL MAKE
THE BALL CURVE CLOCKWISE. A NEGITIVE ANGLE WILL MAKE IT CURVE
ANTI-CLOCKWISE.  THE JACK IS A 4 CM WIDE AND WILL ROLL
STRAIGHT IF YOU HIT IT.  BALLS HIT BY YOUR THROWN BALL MAY
CURVE IN EITHER DIRECTION.

HINT. TRY AN INITIAL VELOCITY OF 500 AND AN ANGLE OF 10
힌트. 처음에는 속도 500, 각도 10이 좋을 것입니다.

THE JACK IS LOCATED AT  2171  77
BALL  1
VELOCITY? 500          속도는?
ANGLE? 10              각도는?

JACK AT COORDINATES  2171  77    볼의 좌표
BALL  1  AT COORDINATES  2434.63 -494.239  IT IS  622.137 FROM THE JACK

     YECH! OVER  20 FEET AWAY!    아! 20피트 지나쳤읍니다.
LONG AND TO THE RIGHT             너무 길고 오른쪽으로 갔읍니다.

BALL  2
VELOCITY? 480
ANGLE? 9

JACK AT COORDINATES  2171  77
BALL  1  AT COORDINATES  2434.63 -494.239  IT IS  622.137 FROM THE JACK
BALL  2  AT COORDINATES  2243.71 -455.535  IT IS  530.476 FROM THE JACK

     YECH! OVER  17 FEET AWAY!
LONG AND TO THE RIGHT

BALL  3
VELOCITY? 600
ANGLE? 3

JACK AT COORDINATES  2171  77
BALL  1  AT COORDINATES  2434.63 -494.239  IT IS  622.137 FROM THE JACK
BALL  2  AT COORDINATES  2243.71 -455.535  IT IS  530.476 FROM THE JACK
BALL  3  AT COORDINATES  3506.13 -710.248  IT IS  1542.95 FROM THE JACK

     YECH! OVER  50 FEET AWAY!
LONG AND TO THE RIGHT

BALL  4
VELOCITY? 300
ANGLE? 5

JACK AT COORDINATES  2171  77
BALL  1  AT COORDINATES  2434.63 -494.239  IT IS  622.137 FROM THE JACK
BALL  2  AT COORDINATES  2243.71 -455.535  IT IS  530.476 FROM THE JACK
BALL  3  AT COORDINATES  3506.13 -710.248  IT IS  1542.95 FROM THE JACK
BALL  4  AT COORDINATES  876.228 -178.163  IT IS  1312.67 FROM THE JACK

     YECH! OVER  43 FEET AWAY!
SHORT AND TO THE RIGHT

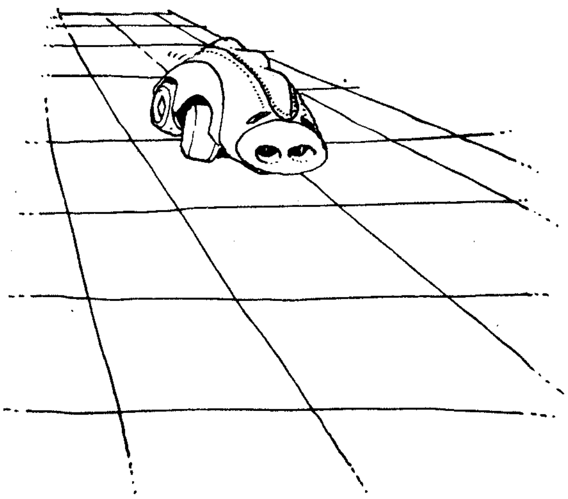
                          잭에서 모든 볼까지 거리의 합계는 4008.23 cm입니다.
THE TOTAL DISTANCE OF ALL BALLS FROM THE JACK IS  4008.23  CM
DON'T PLAY THIS GAME FOR MONEY!! 돈을 걸고 이 게임을 하지 마십시오!

CARE TO TRY AGAIN? ENTER YES OR NO? NO

OK
```

```
10 PRINT TAB( 25);"BOCCE"
20 PRINT TAB( 19);"CREATIVE COMPUTING"
30 PRINT TAB( 17);"MORRISTOWN  NEW JERSEY"
40 PRINT:PRINT:PRINT
1000 Q=5
1010 PRINT "THIS GAME SIMULATES THE GAME OF LAWN BOWLS. ":PRINT
1020 INPUT "DO YOU NEED INSTRUCTIONS";Z$
1030 DIM B(9),B1(9),D(9),V(9),X(9),Y(9)
1040 PRINT:IF LEFT$(Z$,1)="Y" THEN GOSUB 1770
1045 P1=3.14159
1050 S1=0:S2=0:A=-49.3
1070 X(1)=INT(2000+700*RND(1)): Y(1)=INT(200-400*RND(1))
1080 PRINT "THE JACK IS LOCATED AT";X(1);Y(1)
1090 FOR P=2 TO Q
1100 J=P:GOSUB 1570
1110 NEXT P
1120 FOR J=2 TO Q
1130 D1=D1+D(J)
1140 NEXT J
1150 PRINT: PRINT "THE TOTAL DISTANCE OF ALL BALLS FROM THE JACK IS";
1155 PRINT D1;"CM "
1160 IF D1 < Q^2 THEN PRINT "MAGNIFICENT BOWLING! WHAT AN EYE!!"
1165 IF D1 < Q^2 THEN 1230
1170 IF D1<2*Q^2 THEN PRINT"EXCELLENT, BUT COULD BE BETTER. ":GOTO 1230
1180 IF D1 < 3*Q^2 THEN PRINT "GOOD, BUT NEEDS SOME IMPROVEMENT. ":GOTO 1230
1190 IF D1 < 6*Q^2 THEN PRINT "FAIR - YOU NEED MORE PRACTICE. ":GOTO 1230
1200 IF D1 < 10*Q^2 THEN PRINT "POOR - TRY TO BE MORE CONSISTENT. ":GOTO 1230
1210 IF D1 < 20*Q^2 THEN PRINT "YOUR GAME NEEDS LOTS OF WORK. ":GOTO 1230
1220 PRINT "DON'T PLAY THIS GAME FOR MONEY!!"
1230 FOR J=1 TO Q
1232 B(J)=0:B1(J)=0:D(J)=0
1240 V(J)=0:X(J)=0:Y(J)=0
1250 NEXT J
1260 PRINT:INPUT "CARE TO TRY AGAIN";Y$
1270 PRINT:IF LEFT$(Y$,1)="Y" THEN 1050
1280 GOTO 1890
1290 K1=-20
1295 IF J=1 THEN K1=0
1300 A1=A*COS(B(J))+K1*COS((P1/2)+B(J))
1305 A2=A*SIN(B(J))+K1*SIN((P1/2)+B(J))
1310 S3=V(J)*COS(B(J))*.05+.00125*A1
1315 S4=V(J)*SIN(B(J))*.05+.00125*A2
1320 B(J)=ATN((V(J)*SIN(B(J))+A2*.05)/(V(J)*COS(B(J))+A1*.05))
1330 IF B1(J)< 0 THEN S4=-S4
1340 S5=S1+S3: S6=S2+S4
1350 IF J=1 THEN 1370
1360 IF ABS(S5-X(1))<7 AND ABS(S6-Y(1))<7 THEN K=1:GOSUB 1550
1370 FOR K=2 TO Q
1380 IF K=J OR X(K)=0 THEN 1400
1390 IF ABS(S5-X(K))< 10 AND ABS(S6-Y(K))< 10 THEN GOSUB 1500
1400 NEXT K
1410 IF V(J)<ABS(A*.05) THEN 1440
1420 V(J)=V(J)+(A*.05):S1=S5:S2=S6:GOTO 1290
1430 GOTO 1290
1440 X(J)=X(J)+S5: Y(J)=Y(J)+S6:S1=0:S2=0:S5=0:S6=0
1450 FOR L=1 TO Q
1460 IF V(L)>ABS(A*.05) THEN J=L:GOTO  1290
1470 B(L)=0:V(L)=0
1480 NEXT L
1490 GOTO 1630
1500 B(K)=ATN((Y(K)-S2)/(X(K)-S1)): PRINT CHR$(7);
1510 IF J=1 THEN V(J)=V(J)/5
1520 V(J)=ABS(V(J)*SIN(B(J)-B(K))):V(K)=ABS(V(J)*COS(B(J)-B(K)))
1530 B(J)=((P1/2)+B(K)): S5=S1: S6=S2
1540 IF K=1 THEN V(K)=5*V(K)
1550 IF J=1 THEN V(J)=5*V(J)
1560 RETURN
1570 PRINT "BALL";(J-1)
1575 PRINT "-------".
1580 INPUT "VELOCITY";V(J):V(J)=ABS(V(J))
1590 IF V(J) > 1000 THEN PRINT "VELOCITY TOO HIGH ":GOTO 1580
1600 INPUT "ANGLE";B1(J)
1610 IF ABS(B1(J))> 89 THEN PRINT "ANGLE TOO BIG ":GOTO 1290
1620 PRINT : B(J)=ABS(B(J)*P1/180):GOTO 1290
1630 PRINT "JACK AT COORDINATES";X(1);Y(1)
1640 FOR M=2 TO P
1650 D=(SQR((Y(1)-Y(M))^2+(X(1)-X(M))^2))-7
1655 D(M)=D
1660 IF D < 0 THEN D(M)=0
1670 PRINT"BALL";(M-1);"AT COORDINATES";X(M);Y(M);" IT IS ";D(M);
1675 PRINT "FROM THE JACK. "
1680 NEXT M
1690 PRINT
1700 IF D(P) < 10 THEN PRINT TAB( 15);"EXCELLENT SHOT! ";:GOTO 1740
1710 IF D(P) < 20 THEN PRINT TAB( 15);"GOOD SHOOTING! ";:GOTO 1740
1720 IF D(P)< 30 THEN PRINT TAB( 15);"NICE TRY !";:GOTO 1740
1730 IF D(P)>500 THEN PRINT TAB( 5);"YECH! OVER";INT(D(P)/30.48);
1735 IF D(P) > 500 THEN PRINT "FEET AWAY!"
1740 IF X(P)>X(1) THEN PRINT "LONG AND ";
1745 IF X(P)< X(1) THEN PRINT "SHORT AND ";
1750 IF Y(P)>Y(1) THEN PRINT "TO THE LEFT. "
1755 IF Y(P) < Y(1) THEN PRINT "TO THE RIGHT. "
1760 PRINT
1765 RETURN
1770 PRINT "IN THIS GAME YOU ROLL";Q-1;"BALLS SUCCESSIVELY AT A TARGET"
1780 PRINT "BALL (CALLED A JACK). THE OBJECT IS TO GET THE BALLS AS CLOSE"
1790 PRINT "TO THE JACK AS POSSIBLE.  THE BALLS ARE 10 CM. IN DIAMETER AND"
1800 PRINT "ARE WEIGHTED SO THAT THEY ROLL IN A CURVE. YOU WILL HAVE TO"
1810 PRINT "ROLL THEM AT AN ANGLE TO THE LINE FROM YOU AT COORDINATES 0,0"
1820 PRINT "TO THE JACK AT COORDINATES X,Y. A POSITIVE ANGLE WILL MAKE"
1830 PRINT "THE BALL CURVE CLOCKWISE. A NEGATIVE ANGLE WILL MAKE IT CURVE"
1840 PRINT "ANTI-CLOCKWISE.  THE JACK IS 4 CM. WIDE AND WILL ROLL"
1850 PRINT "STRAIGHT IF YOU HIT IT.  BALLS HIT BY YOUR THROWN BALL MAY"
1860 PRINT "CURVE IN EITHER DIRECTION. "
1870 PRINT:PRINT "HINT. TRY AN INITIAL VELOCITY OF 500 AND AN ANGLE OF 10. "
1880 PRINT:PRINT:RETURN
1890 END
```

Boga II (보가 II)



여기에 나오는 보가는 가공(架空)의 동물이다. 보가와 플레이어가 20×20의 바둑판 무늬 안 어딘가에 각각 숨어 있다. 보가는 자기의 위치를 플레이어가 알아맞힐 수 있도록 자꾸 암시해 주나, 플레이어는 자기가 어느 방향에 있는지 보가에게 암시해 주지 않는다. 암시를 받지 않아도, 보가는 상당히 예민한 코를 가지고 있어, 플레이어가 숨은 곳을 잘 알아 낼 수 있기 때문이다. 그러나, 공평을 기하기 위해서, 맨 처음 한 번은 플레이어가 어느 방향에 있는지를 보가에게 가르쳐 주게 되어 있다. 그러면 그 다음에는 보가 자신이 처리한다.

서로의 위치를 보가와 플레이어가 번갈아 알아맞힌다.

게임을 시작하기 전에 grid(바둑판 무늬)를 프린트해 놓을 수 있는데, 이것을 이용하면 도움이 될 것이다.

이 게임에서는, 위가 북, 오른쪽이 동으로 되어 있다. 잘 기억하고 게임에 임하도록.

This game was created by David Strickler.

N

W E

S

```
RUN
                         BOGA II
                    CREATIVE COMPUTING
                  MORRISTOWN, NEW JERSEY


DO YOU WANT INSTRUCTIONS? YES     설명이 필요합니까?

  THE BOGA IS HIDING ON A GRID (YOU SPECIFY THE LENGTH
AND WIDTH).  TRY TO GUESS HIS POSITION USING THE HINTS
I GIVE YOU.  EACH GUESS IS TWO NUMBERS SEPERATED BY
A COMMA.  PLEASE KEEP IN MIND THAT THE BOGA IS ALSO
SEARCHING FOR YOU!!!!


HOW BIG SHOULD THE GRID BE(20 MAXIMUM)? 21

HOW BIG SHOULD THE GRID BE(20 MAXIMUM)? 15   바둑판 무늬의 갯수를 지정해
WOULD YOU LIKE A SAMPLE GRID? YES             주시오(20 이하).
      샘플을 보겠읍니까?
                         1 1 1 1 1 1
     0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
 0   * * * * * * * * * * * * * * * *
 1   * * * * * * * * * * * * * * * *
 2   * * * * * * * * * * * * * * * *
 3   * * * * * * * * * * * * * * * *
 4   * * * * * * * * * * * * * * * *
 5   * * * * * * * * * * * * * * * *
 6   * * * * * * * * * * * * * * * *
 7   * * * * * * * * * * * * * * * *
 8   * * * * * * * * * * * * * * * *
 9   * * * * * * * * * * * * * * * *
10   * * * * * * * * * * * * * * * *
11   * * * * * * * * * * * * * * * *
12   * * * * * * * * * * * * * * * *
13   * * * * * * * * * * * * * * * *
14   * * * * * * * * * * * * * * * *
15   * * * * * * * * * * * * * * * *

CHOOSE YOUR POSITION? -1,16       당신의 위치를 선택하시오.

CHOOSE YOUR POSITION? 4,7
THE BOGA PICKS HIS POSITION!      보가의 위치를 추측해 주시오.
GUESS # 1 ? 7,7
YOU GUESSED 7 , 7

HE'S MORE TO THE SOUTHWEST        보가는 남서쪽에 있읍니다.

THE BOGA GUESSES 7 , 7

GUESS # 2 ? 12,4
YOU GUESSED 12 , 4

HE'S MORE TO THE SOUTHWEST

THE BOGA GUESSES 5 , 7

GUESS # 3 ? 14,1
YOU GUESSED 14 , 1

HE'S MORE TO THE WEST
THE BOGA GUESSES 4 , 7

THE BOGA GUESSED YOUR POSITION IN 3 GUESS(ES)! 보가는 당신의 위치를
                                               3번에 맞혔읍니다.
THE BOGA WAS AT 14 , 0
```

```
DO YOU WANT TO PLAY AGAIN? YES     다시 한 번 하겠읍니까 ?
HOW BIG SHOULD THE GRID BE(20 MAXIMUM)? 4
WOULD YOU LIKE A SAMPLE GRID? YES

     0 1 2 3 4
 0   * * * * *
 1   * * * * *
 2   * * * * *
 3   * * * * *
 4   * * * * *

CHOOSE YOUR POSITION? 2,1
THE BOGA PICKS HIS POSITION!
GUESS # 1 ? 2,2
YOU GUESSED 2 , 2

HE'S MORE TO THE SOUTH

THE BOGA GUESSES 2 , 2

GUESS # 2 ? 4,2
YOU GUESSED 4 , 2

HE'S MORE TO THE NORTH

THE BOGA GUESSES 2 , 1

THE BOGA GUESSED YOUR POSITION IN 2 GUESS(ES)!

THE BOGA WAS AT 3 , 2

DO YOU WANT TO PLAY AGAIN? YES
HOW BIG SHOULD THE GRID BE(20 MAXIMUM)? 4
WOULD YOU LIKE A SAMPLE GRID? NO

CHOOSE YOUR POSITION? 0,4
THE BOGA PICKS HIS POSITION!
GUESS # 1 ? 2,2
YOU GUESSED 2 , 2

HE'S MORE TO THE EAST
THE BOGA GUESSES 2 , 2

GUESS # 2 ? 2,3
YOU GUESSED THE BOGA'S POSITION IN 2 GUESS(ES)!

THE BOGA WAS AT 2 , 3

DO YOU WANT TO PLAY AGAIN? NO
Ok
```

```
10 PRINT TAB( 26);"BOGA II"
14 PRINT TAB( 20);"CREATIVE COMPUTING"
17 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
20 PRINT:PRINT:PRINT
30 INPUT "DO YOU WANT INSTRUCTIONS";Q$
35 PRINT:PRINT
40 IF LEFT$(Q$,1)<>"Y" THEN 220
70 PRINT "  THE BOGA IS HIDING ON A GRID (YOU SPECIFY THE LENGTH"
80 PRINT "AND WIDTH).  TRY TO GUESS HIS POSITION USING THE HINTS"
90 PRINT "I GIVE YOU.  EACH GUESS IS TWO NUMBERS SEPARATED BY"
100 PRINT "A COMMA.  PLEASE KEEP IN MIND THAT THE BOGA IS ALSO"
105 PRINT "SEARCHING FOR YOU!!!!"
110 PRINT:PRINT
220 U=0
240 K=1
250 F=0
260 INPUT "HOW BIG SHOULD THE GRID BE (20 MAXIMUM)";G
275 IF G>20 OR G<1 THEN PRINT:GOTO  260
280 S=G
290 REM: PRINTS THE GRID
300 INPUT "WOULD YOU LIKE A SAMPLE GRID";Z$
305 IF LEFT$(Z$,1)="N" THEN 380
310 PRINT
318 A$=""
320 IF G<10 THEN 332
322 FOR X=10 TO G
324 X1=INT(X/10)
326 A$=A$+CHR$(X1+48)+" "
328 NEXT X
330 PRINT TAB( 25);A$
332 A$=""
334 FOR X=0 TO G
336 X1=X-INT(X/10)*10
338 A$=A$+CHR$(X1+48)+" "
340 NEXT X
342 PRINT TAB( 5);A$
344 A$=""
346 FOR X=0 TO G
348 A$=A$+"* "
350 NEXT X
352 FOR X=0 TO G
354 PRINT USING "##";X; :PRINT TAB( 5);A$
356 NEXT X
380 IF G<20 THEN PRINT
390 H=1
400 INPUT "CHOOSE YOUR POSITION";X1,Y1
411 IF X1>G OR X1<0 OR Y1>G OR Y1<0 THEN PRINT:GOTO 400
420 PRINT "THE BOGA PICKS HIS POSITION!"
440 X2=INT(RND(1)*G)
450 Y2=INT(RND(1)*G)
460 PRINT "GUESS #"K;
470 INPUT X3,Y3
471 IF X3>G OR X3<0 OR Y3>G OR Y3<0 THEN PRINT:GOTO 460
480 K=K+1
490 F=F+1
500 IF K=10 THEN 1040
510 IF ABS(X3-X2)+ABS(Y3-Y2)=0 THEN 1010
520 PRINT "YOU GUESSED"X3","Y3;CHR$(8);"."
530 PRINT
540 PRINT "HE'S MORE TO THE ";
550 IF X2=X3 THEN 620
560 IF X2>X3 THEN 600
570 PRINT "NORTH";
590 GOTO 620
600 PRINT "SOUTH";
620 IF Y2=Y3 THEN 700
630 IF Y2>Y3 THEN 670
640 PRINT "WEST";
660 GOTO 700
670 PRINT "EAST";
690 REM: LINES 700-970 AND 1110-1150=BOGAS GUESSING FORMULA
700 PRINT".":IF H=0 THEN 730
710 X4=INT(.5*S)
720 Y4=INT(.5*S)
730 PRINT "THE BOGA GUESSES"X4","Y4;CHR$(8);"."
740 U=U+1
750 PRINT ""
760 Q=ABS(Y1-Y4)+ABS(X1-X4)
770 IF Q=0 THEN 980
780 H=0
790 IF Y4=Y1 THEN 880
800 A=1
810 IF ABS(Y4-Y1)<2 THEN 830
820 GOSUB 1140
830 IF Y4<Y1 THEN 860
840 Y4=INT(ABS(Y4-A))
850 GOTO 880
860 Y4=INT(ABS(Y4+A))
870 IF Y4>G THEN 1110
880 IF X4=X1 THEN 970
890 A=1
900 IF ABS(X4-X1)<2 THEN 920
910 GOSUB 1140
920 IF X4<X1 THEN 950
930 X4=INT(ABS(X4-A))
940 GOTO 970
950 X4=INT(ABS(X4+A))
960 IF X4>G THEN 1130
970 GOTO 460
980 PRINT "THE BOGA GUESSED YOUR POSITION IN"U"GUESS(ES)!"
990 PRINT
1000 GOTO 1050
1010 PRINT "YOU GUESSED THE BOGA'S POSITION IN"F"GUESS(ES)!"
1020 PRINT
1030 GOTO 1050
1040 PRINT "YOU USED UP ALL OF YOUR GUESSES."
1050 PRINT "THE BOGA WAS AT"X2","Y2;CHR$(8);"."
1060 PRINT
1070 INPUT "DO YOU WANT TO PLAY AGAIN";Q$
1080 IF LEFT$(Q$,1)="Y" THEN 220
1100 GOTO 1160
1110 Y4=.5*G
1120 GOTO 880
1130 X4=.5*G
1140 A=2
1150 RETURN
1160 END
```

Bombrun(폭탄 투하 게임)

전투기가 아주 작은 표적을 겨냥하여 정확히 폭탄을 투하하는 것을 흉내낸 게임이다.

플레이어가 비행기의 상승, 하강 및 그 각도(deg), 비행기의 속도(피트/초), 투하점을 지시한다. 표적의 위는 4회까지밖에 통과할 수 없다.

표적을 명중시키는 일은 참으로 어렵다.

폭탄이 표적으로부터 300피트 이내에 투하되었으면 '지근탄(至近彈)'이라 표시되고, 300피트 이상의 거리에 투하되었으면, 물리 지식이 없음을 비꼬는 코멘트(comment)가 표시된다.

This program was originally written by Jim Prelesnik.

```
RUN
                              BOMBRUN
                         CREATIVE COMPUTING
                       MORRISTOWN, NEW JERSEY


THIS PROGRAM SIMULATES A BOMBING RUN.  DO YOU NEED
INSTRUCTIONS? YES
YOU HAVE THE OPTION OF MAKING FOUR PASSES OVER THE TARGET,
WITH THE ABILITY TO DROP A BOMB ONCE DURING EACH OF
THESE PASSES.  ALTITUDE CHANGES MAYBE MADE THROUGH THE
'CLIMB/DIVE' COMMAND BY PRINTING 'CLIMB' OR 'DIVE',FOL-
LOWED BY A COMMA AND THE DESIRED ANGLE (IN DEGREES).  NEW
VELOCITIES (RANGING FROM 300 TO 900 FEET PER SECOND) MAY
BE INPUT AFTER THE 'AIRSPEED' QUESTION MARK.  'CLIMB/DIVE'
ANGLES, VARYING FROM 0 TO 15 DEGREES, WILL ADD AS SPEC-
IFIED BY 'CLIMB' OR'DIVE' COMMANDS TO YIELD A NET INCLIN-
ATION/DECLINATION ANGLE BETWEEN 0 TO 60 DEGREES, CLIMBING
OR DIVING.  A MINIMUM ALTITUDE OF 100 FEET MUST ALSO BE
MAINTAINED.  WILLFULLY EXCEEDING ANY OF THE MAX./MIN. SPECS
WILL RESULT IN THE CRASH OF YOUR BOMBER.  ALSO , A BOMB
COMMAND OF 'DROP' DURING A DIVE WILL GIVE YOUR BOMB AN IN-
ITIAL DOWNWARD VELOCITY, SHORTENING THE DROP TIME, AS A
'CLIMB' COMMAND WILL LENGTHEN THIS TIME.  THE BOMB WILL BE
LAUNCHED IMMEDIATELY FOLLOWING THE MOST RECENT 'STATS' READ-
OUT UPON 'DROP' COMMAND, AND WILL BE HELD FOR FURTHER
POSITIONING INFORMATION UPON THE COMMAND 'STAND BY'.  THE
TARGET IS 1 FOOT IN DIAMETER.  GOOD LUCK


                             **INITIAL**
                             ***STATS***

경과 시간                ELAPSED TIME... 0 SECONDS
주어진 각도 코맨드 PRESENT ANGLE COMMAND... 0 DEGREES
대지(對地) 각도         RESULTANT ANGLE... 0 DEGREES
주어진 속도            PRESENT VEROCITY...  876.763 FEET PER SECOND
                   고도      ALTITUDE...  428.7 FEET
표적까지의 거리      DISTANCE FROM SITE...  4500 FEET
비행 가능 시간 ESTIMATED TIME OF ARRIVAL...  5.13252 SECONDS


BOMB COMMAND? STAND BY   폭탄 투하 코맨드는?
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES  현재 대지 각도를 유지합니까?

AIRSPEED? 800 대기(對氣) 속도는?
                             ***STATS***

                   ELAPSED TIME... 1 SECOND
          PRESENT ANGLE COMMAND... 0 DEGREES
                RESULTANT ANGLE... 0 DEGREES
               PRESENT VEROCITY...  800 FEET PER SECOND
                       ALTITUDE...  428.7 FEET
             DISTANCE FROM SITE...  3700 FEET
      ESTIMATED TIME OF ARRIVAL...  4.625 SECONDS

BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? NO

'CLIMB/DIVE' COMMAND? DIVE,10    상승, 하강?

AIRSPEED? 600
                             ***STATS***

                   ELAPSED TIME... 2 SECONDS
          PRESENT ANGLE COMMAND... DIVE, 10 DEGREES
                RESULTANT ANGLE... 10 DEGREES DIVING
               PRESENT VEROCITY...  600 FEET PER SECOND
                       ALTITUDE...  324.511 FEET
             DISTANCE FROM SITE...  3109.12 FEET
      ESTIMATED TIME OF ARRIVAL...  5.2618 SECONDS


BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 700
                             ***STATS***

                   ELAPSED TIME... 3 SECONDS
          PRESENT ANGLE COMMAND... 0 DEGREES
                RESULTANT ANGLE... 0 DEGREES DIVING
               PRESENT VEROCITY...  700 FEET PER SECOND
                       ALTITUDE...  202.958 FEET
             DISTANCE FROM SITE...  2419.75 FEET
      ESTIMATED TIME OF ARRIVAL...  3.51011 SECONDS


BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 700
IF YOUR ALTITUTE ISN'T INCREASED IMMEDIATELY TO A MIN- 고도를 올리지 않으면
IMUM OF 100 FEET, A CRASH IS IMMINENT.          최저 고도 100피트가 되어
                                                지상에 격돌합니다.
'CLIMB/DIVE' COMMAND? CLIMB,20

YOUR BOMBER CANNOT TOLERATE THE STRESS CAUSED BY ANGLE
INPUTS EXCEEDING 15 DEGREES.  RECONSIDER YOUR CHOICE.
15°를 넘는 대지 각도에는 견디지 못합니다. 앙각을 바꾸십시오.
'CLIMB/DIVE' COMMAND? CLIMB,12

AIRSPEED? 500
YOUR BOMBER FAILED TO MAINTAIN THE LOW ALTITUTE YOU DE-
SIRED AND SOON CRASHED.     최저 고도 유지에 실패, 지면에 격돌!
BETTER LUCK NEXT TIME.      다음의 행운을 빕니다.

DURING YOUR 1 -PASS BOMBRUN, YOU MANAGED TO STRIKE
WITHIN 0 FEET OF THE TARGET.

WOULD YOU LIKE TO RELOAD AND PLAY AGAIN? 다시 한 번 하겠읍니까?
? YES


                             **INITIAL**
                             ***STATS***

                   ELAPSED TIME... 0 SECONDS
          PRESENT ANGLE COMMAND... 0 DEGREES
                RESULTANT ANGLE... 0 DEGREES
               PRESENT VEROCITY...  567.958 FEET PER SECOND
                       ALTITUDE...  182.338 FEET
             DISTANCE FROM SITE...  4500 FEET
      ESTIMATED TIME OF ARRIVAL...  7.92312 SECONDS


BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 700
```

Later in the game

```
BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 750
                              ***STATS***

                 ELAPSED TIME... 2 SECONDS
         PRESENT ANGLE COMMAND... 0 DEGREES
               RESULTANT ANGLE... 0 DEGREES
              PRESENT VEROCITY...  750 FEET PER SECOND
                      ALTITUDE...  128.552 FEET
             DISTANCE FROM SITE...  3000 FEET
      ESTIMATED TIME OF ARRIVAL...  4 SECONDS


BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 750
                              ***STATS***

                 ELAPSED TIME... 3 SECONDS
         PRESENT ANGLE COMMAND... 0 DEGREES
               RESULTANT ANGLE... 0 DEGREES
              PRESENT VEROCITY...  750 FEET PER SECOND
                      ALTITUDE...  128.552 FEET
             DISTANCE FROM SITE...  2250 FEET
      ESTIMATED TIME OF ARRIVAL...  3 SECONDS


BOMB COMMAND? STAND BY
STANDING BY.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 750
                              ***STATS***

                 ELAPSED TIME... 4 SECONDS
         PRESENT ANGLE COMMAND... 0 DEGREES
               RESULTANT ANGLE... 0 DEGREES
              PRESENT VEROCITY...  750 FEET PER SECOND
                      ALTITUDE...  128.552 FEET
             DISTANCE FROM SITE...  1500 FEET
      ESTIMATED TIME OF ARRIVAL...  2 SECONDS


BOMB COMMAND? STAND BY PLEASE   폭탄 투하 코맨드는?
UNRECOGNIZABLE COMMAND.  REPLY 'STAND BY' OR 'DROP'.
STANDING BY. ←코맨드 이름 불명.

MAINTAIN PRESENT RESULTANT ANGLE? YES

AIRSPEED? 300
                              ***STATS***

                 ELAPSED TIME... 5 SECONDS
         PRESENT ANGLE COMMAND... 0 DEGREES
               RESULTANT ANGLE... 0 DEGREES
              PRESENT VEROCITY...  300 FEET PER SECOND
                      ALTITUDE...  128.552 FEET
             DISTANCE FROM SITE...  1200 FEET
      ESTIMATED TIME OF ARRIVAL...  4 SECONDS


BOMB COMMAND? DROP          폭탄 투하 코맨드는?
BOMB DROPPED.               투하 완료.
TIME TO EXPLOSION...  2.8257 SECONDS  폭발까지의 시간.

THE BOMB LANDED 352.28 FEET IN FRONT OF THE TARGET'S CENTER.
           목표에서 352.28피트 못미친 곳에 떨어졌읍니다.
DURING YOUR 4 -PASS BOMBRUN, YOU MANAGED TO STRIKE
WITHIN 0 FEET OF THE TARGET.

WOULD YOU LIKE TO RELOAD AND PLAY AGAIN?
? NO
LOOK OVER THE PHYSICS LAWS GOVERNING FALLING BODIES,
AND RETURN TO PLAY AGAIN SOON.  물리학의 낙하의 법칙을 공부한 후,
Ok                               다시 오기 바랍니다.
```

```
6 F$=" ###.##"
10 PRINT TAB( 27)"BOMBRUN"
13 PRINT TAB( 20)"CREATIVE COMPUTING"
15 PRINT TAB( 18)"MORRISTOWN, NEW JERSEY"
19 PRINT:PRINT
20 PRINT"THIS PROGRAM SIMULATES A BOMBING RUN.  DO YOU NEED"
25 X5=3000
30 PRINT"INSTRUCTIONS";
40 INPUT I$
50 IF LEFT$(I$,1)="Y" THEN 90 ELSE GOTO 290
90 PRINT"   YOU HAVE THE OPTION OF MAKING FOUR PASSES OVER THE TARGET,"
100 PRINT"WITH THE ABILITY TO DROP A BOMB ONCE DURING EACH OF"
110 PRINT"THESE PASSES.  ALTITUDE CHANGES MAYBE MADE THROUGH THE"
120 PRINT "'CLIMB/DIVE' COMMAND BY PRINTING 'CLIMB' OR 'DIVE',FOL-"
130 PRINT"LOWED BY A COMMA AND THE DESIRED ANGLE (IN DEGREES).  NEW"
140 PRINT"VELOCITIES (RANGING FROM 300 TO 900 FEET PER SECOND) MAY"
150 PRINT"BE INPUT AFTER THE 'AIRSPEED' QUESTION MARK.  'CLIMB/DIVE'"
160 PRINT"ANGLES, VARYING FROM 0 TO 15 DEGREES, WILL ADD AS SPEC-"
170 PRINT"IFIED BY 'CLIMB' OR'DIVE' COMMANDS TO YIELD A NET INCLIN-"
180 PRINT "ATION/DECLINATION ANGLE BETWEEN 0 TO 60 DEGREES, CLIMBING"
190 PRINT "OR DIVING.  A MINIMUM ALTITUDE OF 100 FEET MUST ALSO BE"
200 PRINT"MAINTAINED.  WILLFULLY EXCEEDING ANY OF THE MAX./MIN. SPECS"
210 PRINT"WILL RESULT IN THE CRASH OF YOUR BOMBER.  ALSO, A BOMB"
220 PRINT"COMMAND OF 'DROP' DURING A DIVE WILL GIVE YOUR BOMB AN IN-"
230 PRINT"ITIAL DOWNWARD VELOCITY, SHORTENING THE DROP TIME, AS A"
240 PRINT"'CLIMB' COMMAND WILL LENGTHEN THIS TIME.  THE BOMB WILL BE"
250 PRINT"LAUNCHED IMMEDIATELY FOLLOWING THE MOST RECENT 'STATS' READ-"
260 PRINT "OUT UPON 'DROP' COMMAND, AND WILL BE HELD FOR FURTHER"
270 PRINT"POSITIONING INFORMATION UPON THE COMMAND 'STAND BY'.  THE"
280 PRINT"TARGET IS 1 FOOT IN DIAMETER.  GOOD LUCK!"
290 Z1=1000
300 Z2=1000
310 Z3=1000
320 Z4=1000
330 R=R+1
340 W1=0
350 X2=0
360 W3=0
370 W4=0
380 T=0
390 A1=0
400 A=0
410 V1=RND(1)
420 V=V1*1000
430 IF V<300 OR V>900 THEN 410
440 Y1=RND(1)
450 Y=Y1*500
460 IF Y<100 THEN 440
470 X=4500
480 PRINT" "
490 PRINT" "
500 E=X/V
510 PRINT CHR$(26);TAB( 30)"**INITIAL**"
520 PRINT TAB( 30)"***STATS***"
530 GOTO 1430
540 W1=0
550 W2=0
560 W3=0
570 W4=0
580 PRINT" "
590 PRINT"BOMB COMMAND";
600 INPUT C$
610 IF LEFT$(C$,1)="S" THEN 640
620 IF LEFT$(C$,1)="D" THEN 1680
630 PRINT"UNRECOGNIZABLE COMMAND.  REPLY 'STAND BY' OR 'DROP'.":GOTO 590
640 PRINT"STANDING BY."
650 PRINT " "
660 GOTO 700
670 A=A-A1
680 T=T-1
690 GOTO 770
700 PRINT"MAINTAIN PRESENT RESULTANT ANGLE";
710 INPUT P$
720 PRINT" "
730 IF LEFT$(P$,1)="Y" THEN 1130
740 IF LEFT$(P$,1)="N" THEN 770
750 PRINT"REPLY 'YES' OR 'NO'.";
760 GOTO 710
770 PRINT"'CLIMB/DIVE' COMMAND";
780 INPUT A$,A1
790 PRINT" "
800 IF A1<0 THEN 830
810 IF A1>15 THEN 870
820 GOTO 930
830 PRINT"ANGLE INPUT MUST BE POSITIVE.  IF NECESSARY, CHANGE THE"
840 PRINT"'DIVE' COMMAND TO 'CLIMB', OR VICE VERSA."
850 PRINT" "
860 GOTO 770
```

```
870 W1=W1+1
880 IF W1=2 THEN 2120
890 PRINT"YOUR BOMBER CANNOT TOLERATE THE STRESS CAUSED BY ANGLE"
900 PRINT"INPUTS EXCEEDING 15 DEGREES.  RECONSIDER YOUR CHOICE."
910 PRINT" "
920 GOTO 770
930 IF A$="CLIMB" THEN 950
940 A1=-A1
950 A=A+A1
960 IF A<-60 THEN 990
970 IF A>60 THEN 1060
980 GOTO 1140
990 W2=W2+1
1000 IF W2=2 THEN 2170
1010 PRINT"YOUR PRESENT'DIVE' COMMAND WILL EXCEED THE MAXIMUN RE-"
1020 PRINT"SULTANT DIVE ANGLE OF 60 DEGREES, CAUSING AN IRREVERSIBLE"
1030 PRINT" NOSEDIVE.  RECONSIDER YOUR CHOICE."
1040 PRINT" "
1050 GOTO 670
1060 W3=W3+1
1070 IF W3=2 THEN 2210
1080 PRINT"YOUR PRESENT 'CLIMB' COMMAND WILL EXCEED THE  MAXIMUN RE-"
1090 PRINT"SULTANT CLIMB ANGLE OF 60 DEGREES, CAUSING YOUR"
1100 PRINT"ENGINES TO FAIL AND YOUR PLANE TO CRASH.  RECONSIDER YOUR "
1105 PRINT"CHOICE"
1110 PRINT" "
1120 GOTO 670
1130 A1=0
1140 PRINT"AIRSPEED";
1150 INPUT V
1160 IF V>900 THEN 1190
1170 IF V<300 THEN 1230
1180 GOTO 1290
1190 PRINT"YOUR BOMBER ISN'T CAPABLE OF ATTAINING THAT VELOCITY."
1200 PRINT"INPUT AN AIRSPEED LESS THAN 900 FEET PER SECOND."
1210 PRINT" "
1220 GOTO 1150
1230 W4=W4+1
1240 IF W4=2 THEN 2250
1250 PRINT"IF YOUR VELOCITY ISN'T INCREASED IMMEDIATELY, YOUR BOMBER"
1260 PRINT"WILL FALL TO EARTH AND BE DESTROYED."
1270 PRINT" "
1280 GOTO 1140
1290 T=T+1
1300 B=A*3.14159/180
1310 Y=Y+V*SIN(B)
1320 IF Y>100 THEN 1390
1330 W5=W5+1
1340 IF W5=2 THEN 2290
1350 PRINT"IF YOUR ALTITUTE ISN'T INCREASED IMMEDIATELY TO A MIN-"
1360 PRINT"IMUN OF 100 FEET, A CRASH IS IMMINENT."
1370 PRINT" "
1380 GOTO 670
1390 X=X-V*COS(B)
1400 IF X<=0 THEN 2350
1410 E=X/(V*COS(B))
1420 PRINT TAB( 30)"***STATS***"
1430 PRINT" "
1440 IF T<>1 THEN 1470
1450 PRINT TAB( 20)"ELAPSED TIME...  1 SECOND"
1460 GOTO 1480
1470 PRINT TAB( 20)"ELAPSED TIME...";:PRINT USING "###";T;:PRINT " SECONDS"
1480 IF NOT(A1=0) THEN 1510
1490 PRINT TAB( 11)"PRESENT ANGLE COMMAND...  0 DEGREES"
1500 GOTO 1550
1510 IF A$="CLIMB" THEN 1540
1520 PRINT TAB( 11)"PRESENT ANGLE COMMAND...  DIVE,";-A1;"DEGREES"
1530 GOTO 1550
1540 PRINT TAB( 11)"PRESENT ANGLE COMMAND...  CLIMB,";A1;"DEGREES"
1550 IF A<0 THEN 1590
1560 IF A>0 THEN 1610
1570 PRINT TAB( 17)"RESULTANT ANGLE...  0 DEGREES"
1580 GOTO 1620
1590 PRINT TAB( 17)"RESULTANT ANGLE... ";-A1;"DEGREES DIVING"
1600 GOTO 1620
1610 PRINT TAB( 17)"RESULTANT ANGLE... ";A;"DEGREES CLIMBING"
1620 PRINT TAB( 16)"PRESENT VELOCITY... ";:PRINT USING F$;V;" FEET PER SECOND"
1630 PRINT TAB( 24)"ALTITUDE... ";:PRINT USING F$;Y;:PRINT " FEET"
1640 PRINT TAB( 14)"DISTANCE FROM SITE... ";:PRINT USING "##,###";X;" FEET"
1650 PRINT TAB( 7)"ESTIMATED TIME OF ARRIVAL... ";:PRINT USING"##.##";E;" SECOND
1660 PRINT
1670 GOTO 540
1680 PRINT"BOMB DROPPED."
1690 T3=(SQR((V*SIN(B))^2+64.4*Y)+V*SIN(B))/32.2
1700 PRINT"TIME TO EXPLOSION... ";T3;"SECONDS"
1710 X=X-V*COS(B)*T3
1720 X=INT(X*100)/100
1725 IF X5>ABS(X) THEN X5=ABS(X)
1730 PRINT " "
1740 IF X<-.5 THEN 1780
1750 IF X>.5 THEN 1800
1760 PRINT"CONGRATULATIONS, YOU SCORED A PERFECT HIT."
1770 GOTO 2030
1780 PRINT"THE BOMB LANDED";-X;"FEET BEYOND THE TARGET'S CENTER."
1790 GOTO 1810
1800 PRINT"THE BOMB LANDED";X;"FEET IN FRONT OF THE TARGET'S CENTER."
1810 IF R=1 THEN 1850
1820 IF R=2 THEN 1870
1830 IF R=3 THEN 1890
1840 IF R=4 THEN 1910
1850 Z1=ABS(X)
1860 GOTO 2400
1870 Z2=ABS(X)
1880 GOTO 2420
1890 Z3=ABS(X)
1900 GOTO 2440
1910 Z4=ABS(X)
1920 Z1=Z10(1):Z2=Z10(2):Z3=Z10(3):Z4=Z10(4)
1921 FOR M=1 TO 4
1922 FOR M1= 4 TO 1 STEP-1
1923 IF Z10(M)<Z10(M1) THEN Z10(M)=X5
1924 IF M=M1 AND M=1 THEN 1926
1925 NEXT M1
1926 NEXT M
1930 PRINT" "
1940 IF X5<= 300 THEN 2000
1950 PRINT"DURING YOUR";R;CHR$(8);"-PASS BOMBRUN, YOU FAILED TO EVEN"
1960 PRINT"THREATEN THE TARGET WITH A HIT.  BETTER LUCK NEXT TIME."
1970 IF LEFT$(R$,1)="N" THEN 2590
1980 GOTO 2040
1990 GOTO 2610
2000 PRINT"DURING YOUR";R;CHR$(8);"-PASS BOMBRUN, YOU MANAGED TO STRIKE"
2010 PRINT"WITHIN";X5;"FEET OF THE TARGET."
2020 PRINT" "
2030 IF R$="NO" THEN 2590
2040 PRINT"WOULD YOU LIKE TO RELOAD AND PLAY AGAIN";
2050 INPUT A$
2060 IF LEFT$(A$,1)="Y" THEN 2100 ELSE GOTO 2590
2100 R=0
2110 GOTO 290
2120 PRINT"YOU TORE THE WINGS OFF OF YOUR BOMBER BY EXCEEDING THE"
2130 PRINT"MAXIMUN ANGLE INPUT OF 15 DEGREES, NEXT TIME TAKE MY ADVICE."
2150 H=1
2160 GOTO 1920
2170 PRINT"THE STEEP DIVE ANGLE DESIRED CAUSED AN IRREVERISIBLE NOSE-"
2180 PRINT"DIVE, RESULTING IN THE DESTRUCTION OF YOUR BOMBER."
2190 H=1
2200 GOTO 1920
2210 PRINT"THE ENGINES OF YOUR BOMBER FAILED WHILE CLIMBING THE"
2220 PRINT"STEEP ANGLE INPUT DURING YOUR ANGLE COMMAND OPPORTUNITY."
2230 H=1
2240 GOTO 1920
2250 PRINT"THE VELOCITY OF YOUR BOMBER WAS INSUFFICIENT TO SUPPORT"
2260 PRINT"ITS WEIGHT, AND CONSEQUENTLY IT CRASHED."
2270 H=1
2280 GOTO 1920
2290 PRINT"YOUR BOMBER FAILED TO MAINTAIN THE LOW ALTITUTE YOU DE-"
2300 PRINT"SIRED AND SOON CRASHED."
2310 PRINT"BETTER LUCK NEXT TIME."
2320 H=1
2330 GOTO 1920
2340 PRINT"YOUR BOMBER JUST PASSED UP THE TARGET, AND NEEDLESS TO"
2350 PRINT"SAY, YOU NO LONGER THREATEN ITS EXISTANCE."
2360 PRINT" "
2370 IF R=2 THEN 2420
2380 IF R=3 THEN 2440
2390 IF R=4 THEN 1920
2400 Q$="SECOND"
2410 GOTO 2450
2420 Q$="THIRD"
2430 GOTO 2450
2440 Q$="FOURTH AND FINAL"
2450 IF R>1 THEN 2490
2460 PRINT"YOU HAVE THUS FAR COMPLETED 1 RUN.  WOULD YOU LIKE TO"
2470 PRINT"MAKE ANOTHER PASS";
2480 GOTO 2510
2490 PRINT"YOU HAVE THUS FAR COMPLETED";R;"RUNS.  WOULD YOU LIKE TO "
2500 PRINT"MAKE ANOTHER PASS";
2510 INPUT R$
2520 IF LEFT$(R$,1)="Y" THEN 2560
2530 IF LEFT$(R$,1)="N" THEN 1920
2540 PRINT"SIMPLY REPLY 'YES' OR 'NO'."
2550 GOTO 2510
2560 PRINT"YOUR PLANE HAS CIRCLED, AND IS NOW IN POSITION TO MAKE"
2570 PRINT"ITS ";Q$;" PASS.":PRINT
2575 LINE INPUT "ENTER 'RETURN' WHEN YOU ARE READY. ";XX$
2580 GOTO 330
2590 PRINT:PRINT"LOOK OVER THE PHYSICS LAWS GOVERNING FALLING BODIES,"
2600 PRINT"AND RETURN TO PLAY AGAIN SOON."
2610 END
```

Bridge-It (다리놓기)

이 게임은, 둘이서 하는 Paper Game을 컴퓨터 화면에 그대로 옮겨 놓은 것이라 할 수 있다. 두 플레이어를 각각 X와 O로 한다. 물론 이 게임에서는 컴퓨터가 플레이어 한 사람의 역할(X의 역할)을 맡게 된다.

판(board)에 X와 O가 서로 엇갈려 그려져 있는데, X는 세로로 ! 을 사용하여 X끼리 연결하고, O는 가로로 -를 사용하여 연결한다. 이것을 먼저 연결한 쪽이 이기는 것이다.

플레이는 교대로 한 번씩 한다.

X좌표, Y좌표의 값을 키이인함으로서 플레이어가 원하는 위치에 'MOVE(-)'를 표시할 수 있는데, 이 'MOVE(-)'를 표시하면 연결된 것으로 간주한다.

게임하는 도중 'BOARD(YES OR NO)?'가 화면에 나타날 때 Y를 키이인하면, 그 때의 판(board)의 상태가 화면에 나타난다.

This program was written by Michael Kass, Miles Barel, and Alan Segal.

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RUN
                    BRIDGE-IT
                CREATIVE COMPUTING
              MORRISTOWN, NEW JERSEY

DO YOU WANT INSTRUCTIONS? YES  설명이 필요합니까?

THE OBJECT OF THIS GAME IS FOR YOU TO GO FROM THE LEFT
COLUMN TO THE RIGHT COLUMN BY CONNECTING THE O'S.  THE COM-
PUTER MUST GO FROM THE TOP TO THE BOTTOM BY CONNECTING
THE X'S.

YOU MAKE YOUR MOVES BY TYPING IN THE COORDINATES (X,Y) OR
(COLUMN,ROW)
OF THE 'O' YOU WISH TO MOVE FROM AFTER THE COMPUTER
 TYPES:

YOUR MOVE FROM?

AND BY TYPING IN THE COORDINATES OF THE'O' YOU WISH TO MOVE
TO AFTER THE COMPUTER TYPES:

TO?

YOU CAN MOVE EITHER VERTICALLY OR HORIZONTALLY,
BUT NOT DIAGONALLY.  YOU CANNOT MOVE VERTICALLY IN EITHER
THE FIRST COLUMN OR THE THIRTEENTH COLUMN. THE COMPUTER WILL
MOVE FIRST.

TEAR ON LINE
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YOU MAY USE THIS BOARD TO MARK THE MOVES ON, OR
YOU CAN GET AN UPDATED BOARD AFTER YOU MAKE EACH MOVE.


             1111
    1234567890123
 13  X X X X X X
 12 0 0 0 0 0 0 0
 11  X X X X X X
 10 0 0 0 0 0 0 0
  9  X X X X X X
  8 0 0 0 0 0 0 0
  7  X X X X X X
  6 0 0 0 0 0 0 0
  5  X X X X X X
  4 0 0 0 0 0 0 0
  3  X X X X X X
  2 0 0 0 0 0 0 0
  1  X X X X X X
    1234567891111
             0123

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TEAR ON LINE
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I MOVE FROM 2,1 TO 2,3  나는 2,1에서 2,3으로 움직입니다.

YOUR MOVE FROM? 1,4  당신은 어디에서?
TO? 3,4  어디로?

BOARD (YES OR NO)? N  보드를 보겠읍니까?

I MOVE FROM  4 , 3 TO  4 , 5


YOUR MOVE FROM? 3,2
TO? 3,4

BOARD (YES OR NO)? N

I MOVE FROM  4 , 1 TO  4 , 3


YOUR MOVE FROM? 3,3
TO? 5,3

INVALID MOVE -- TRY AGAIN  잘못 움직였읍니다. 다시 한 번.
YOUR MOVE FROM? 3,6
TO? 5,6
BOARD (YES OR NO)? N

I MOVE FROM  6 , 5 TO  6 , 7


YOUR MOVE FROM? 5,4
TO? 5,6

BOARD (YES OR NO)? N

I MOVE FROM  6 , 3 TO  6 , 5


YOUR MOVE FROM? 5,8
TO? 7,8

BOARD (YES OR NO)? N

I MOVE FROM  8 , 7 TO  8 , 9


YOUR MOVE FROM? 7,10
TO? 9,10
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BOARD (YES OR NO)? Y

             1111
   1234567890123
13  X X X X X X
12 0 0 0 0 0 0 0
11  X X X X X X
10 0 0 0 0-0 0 0
 9  X X X X X X
 8 0 0 0-0!0 0 0
 7  X X X X X X
 6 0 0-0!0 0 0 0
 5  X X!X X X X
 4 0-0!0'0 0 0 0
 3  X!X X X X X
 2 0'0!0 0 0 0 0
 1  X X X X X X
   1234567891111
            0123


I MOVE FROM  10 , 9 TO  10 , 11


YOUR MOVE FROM? 9,8
TO? 9,10

BOARD (YES OR NO)? N

I MOVE FROM  10 , 7 TO  10 , 9


YOUR MOVE FROM? 7,6
TO? 7,8

BOARD (YES OR NO)? N

I MOVE FROM  8 , 5 TO  8 , 7


YOUR MOVE FROM? 9,12
TO? 11,12

BOARD (YES OR NO)? N

I MOVE FROM  12 , 11 TO  12 , 13
I WIN!!!!  내가 이겼읍니다!

BOARD (YES OR NO)? Y

             1111
   1234567890123
13  X X X X X X
12 0 0 0 0 0-0!0
11  X X X X X X
10 0 0 0 0-0!0 0
 9  X X X X!X X
 8 0 0 0-0!0'0 0
 7  X X X!X X X
 6 0 0-0!0!0 0 0
 5  X X!X X X X
 4 0-0!0!0 0 0 0
 3  X!X X X X X
 2 0!0!0 0 0 0 0
 1  X X X X X X
   1234567891111
            0123
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5 PRINT TAB( 24);"BRIDGE-IT"
10 PRINT TAB( 20);"CREATIVE COMPUTING"
20 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
30 I=I-2
42 PRINT
50 PRINT
70 PRINT"DO YOU WANT INSTRUCTIONS";
80 INPUT B4$
90 PRINT
100 IF LEFT$(B4$,1)="N" THEN 300
110 PRINT CHR$(26)
120 PRINT"THE OBJECT OF THIS GAME IS FOR YOU TO GO FROM THE LEFT "
130 PRINT"COLUMN TO THE RIGHT COLUMN BY CONNECTING THE O'S.  THE"
140 PRINT"COMPUTER MUST GO FROM THE TOP TO THE BOTTOM BY CONNECTING"
145 PRINT"THE X'S. "
150 PRINT
160 PRINT"YOU MAKE YOUR MOVES BY TYPING IN THE COORDINATES (X, Y) OR"
170 PRINT"(COLUMN, ROW) OF THE 'O' YOU WISH TO MOVE FROM AFTER THE"
171 PRINT"COMPUTER TYPES:"
180 PRINT
190 PRINT"YOUR MOVE FROM?"
200 PRINT
210 PRINT"AND BY TYPING IN THE COORDINATES OF THE 'O' YOU WISH TO MOVE"
220 PRINT"TO AFTER THE COMPUTER TYPES:"
230 PRINT
240 PRINT"TO?"
250 PRINT
260 PRINT"YOU CAN MOVE EITHER VERTICALLY OR HORIZONTALLY, BUT NOT"
270 PRINT"DIAGONALLY.  YOU CANNOT MOVE VERTICALLY IN EITHER THE FIRST"
280 PRINT"COLUMN OR THE THIRTEENTH COLUMN.  THE COMPUTER WILL MOVE FIRST. "
290 PRINT:LINE INPUT "ENTER 'RETURN' TO START THE GAME.  ";RESP$
300 DIM X(20,20)
320 DIM O(20,20)
330 DIM T(20,20)
340 FOR X=1 TO 13 STEP 2
350 FOR Y=2 TO 12 STEP 2
360 O(X,Y)=1
370 X(Y,X)=1
380 NEXT Y
390 NEXT X
400 INPUT "DO YOU WANT A PRINTED BOARD";RESP$
401 IF LEFT$(RESP$,1)="Y" THEN GOSUB 990
410 PRINT
420 PRINT"BOARD (YES OR NO)";
430 INPUT B$
440 PRINT
450 IF LEFT$(B$,1)="N" THEN 490
480 GOSUB 990:REM PRINT BOARD SUBROUTINE
490 IF E<>5 THEN 510
500 GOTO 3010
510 GOSUB 1640:REM COMPUTER MOVE
520 GOSUB 640:REM COMPUTER WIN SUBROUTINE
530 PRINT
540 IF E=5 THEN 420
550 GOSUB 2710:REM PLAYER WIN SUBROUTINE
560 PRINT
570 PRINT"YOUR MOVE FROM";
580 INPUT F,G
590 PRINT"TO";
600 INPUT F1,G1
610 PRINT
620 GOSUB 2220:REM ERROR AND CHANGE BOARD SUBROUTINE
630 GOTO 420
640 REM WIN SUBROUTINE --------
650 REM FIRST TEST
660 FOR H=1 TO 11 STEP 2
670 J=12
680 IF O(H,J)=3 THEN 710
690 NEXT H
700 GOTO 980
710 FOR I=1 TO 11 STEP 2
720 J=2
730 IF O(I,J)=3 THEN 760
740 NEXT I
750 GOTO 980
760 REM OTHER TESTS
770 J=J+2
780 IF J=12 THEN 960
790 IF O(I,J)=3 THEN 870
800 IF O(I+1,J+1)=2 THEN 890
810 IF I-1<0 THEN 840
820 IF O(I-1,J-1)=2 THEN 920
830 IF X(I+1,J+1)=2 THEN 890
840 IF I-1<0 THEN 980
850 IF X(I-1,J-1) THEN 890
860 GOTO 740
870 J=J+2
880 GOTO 780
890 J=J
900 I=I+2
910 GOTO 780
920 J=J
950 GOTO 980
960 PRINT"I WIN!!!!"
970 E=5
980 RETURN
990 REM PRINT BOARD SUBROUTINE --------
1000 R=R+1
1010 IF R>1 THEN 1150
1020 PRINT "TEAR ON LINE"
1030 PRINT "--------------------------------------"
1040 PRINT "YOU MAY USE THIS BOARD TO MARK THE MOVES ON, OR"
1050 PRINT "YOU CAN GET AN UPDATED BOARD AFTER YOU MAKE EACH MOVE. "
1060 PRINT
1070 PRINT
1080 PRINT
1090 PRINT
1100 PRINT
1110 PRINT
1120 PRINT TAB( 5);CHR$(7);CHR$(13);TAB( 5);CHR$(7)
1130 PRINT
1140 PRINT
1150 D=0
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1160 PRINT TAB( 13)"1111"
1170 PRINT TAB( 4)"1234567890123"
1180 FOR Y=13 TO 1 STEP -1
1190 IF Y<10 THEN 1220
1200 PRINT Y;
1210 GOTO 1230
1220 PRINT" "Y;
1230 FOR X=1 TO 13 STEP 1
1240 IF Y/2=INT(Y/2) THEN 1330
1250 IF X(X,Y)=0 THEN 1420
1260 ON X(X,Y) GOTO 1270,1290,1310
1270 PRINT"X ";
1280 GOTO 1450
1290 PRINT"X-";
1300 GOTO 1450
1310 PRINT"X!";
1320 GOTO 1450
1330 D=0
1340 IF O(X,Y)=0 THEN 1450
1350 ON O(X,Y) GOTO 1360,1380,1400
1360 PRINT "O ";
1370 GOTO 1450
1380 PRINT"O-";
1390 GOTO 1450
1400 PRINT"O!";
1410 GOTO 1450
1420 D=D+1
1430 IF D>1 THEN 1450
1440 PRINT " ";
1450 NEXT X
1460 GOSUB 1620
1470 NEXT Y
1480 PRINT TAB( 4)"1234567891111"
1490 PRINT TAB( 13)"0123"
1580 PRINT
1590 PRINT
1600 PRINT
1610 RETURN
1620 PRINT
1630 RETURN
1640 REM COMPUTER MOVE SUBROUTINE --------
1650 B=B+1
1660 IF B>1 THEN 1710
1670 O(1,2)=3
1680 PRINT "I MOVE FROM 2,1 TO 2,3"
1690 B1=B1+1
1700 IF B1>1 THEN 1890
1710 FOR C=3 TO 11 STEP 2
1720 T(C,C+1)=1
1730 T(C-2,C+1)=1
1740 GOTO 1790
1750 NEXT C
1760 T(2,3)=3
1770 T(7,12)=2
1780 GOTO 1890
1790 FOR Q=C+3 TO 12 STEP 2
1800 T(C-2,Q)=2
1810 T(C-1,Q+1)=2
1820 T(C-1,Q-1)=2
1830 NEXT Q
1840 FOR S=C TO 3 STEP -2
1850 T(C-1,S)=3
1860 T(C,S-1)=3
1870 NEXT S
1880 GOTO 1750
1890 IF F>F1 THEN 1950
1900 IF F<>F1 THEN 1920
1910 IF G>G1 THEN 1950
1920 X=F
1930 Y=G
1940 GOTO 1970
1950 X=F1
1960 Y=G1
1970 IF T(X,Y)=0 THEN 2210
1980 IF F<>F1 THEN 2000
1990 ON T(X-1,Y+1) GOTO 2010,2080,2150
2000 ON T(X,Y) GOTO 2010,2080,2150
2010 IF X=Y-1 THEN 2050
2020 O(X+2,Y)=3
2030 PRINT"I MOVE FROM ";X+3;",";Y-1;"TO ";X+3;",";Y+1
2040 GOTO 2210
2050 O(X-2,Y)=3
2060 PRINT"I MOVE FROM ";X-1;",";Y-1;"TO ";X-1;",";Y+1
2070 GOTO 2210
2080 IF X(X-1,Y+1)=3 THEN 2120
2090 X(X+1,Y-1)=2
2100 PRINT"I MOVE FROM ";X+1;",";Y-1;"TO ";X+3;",";Y-1
2110 GOTO 2210
2120 O(X-2,Y+2)=3
2130 PRINT"I MOVE FROM ";X-1",";Y+1;"TO ";X-1;",";Y+3
2140 GOTO 2210
2150 IF X(X-1,Y+1)=3 THEN 2190
2160  (X-1,Y+1)=2
2170 PRINT"I MOVE FROM " X-1;",";Y+1;"TO ";X+1;",";Y+1
2180 GOTO 2210
2190 O(X,Y)=3
2200 PRINT"I MOVE FROM ";X+1;",";Y-1;"TO ";X+1",";Y+1
2210 RETURN
2220 REM ERROR AND CHANGE BOARD SUBROUTINE---------
2230 IF F<>F1 THEN 2280
2240 IF F=1 THEN 2630
2250 IF F=13 THEN 2630
2260 IF F1=13 THEN 2630
2270 IF G=G1 THEN 2630
2280 IF F/2=INT(F/2) THEN 2630
2290 IF F>13 THEN 2630
2300 IF G>12 THEN 2630
2310 IF G/2<> INT(G/2) THEN 2630
2320 IF F<>INT(F) THEN 2630
2330 IF F<1 THEN 2630
2340 IF G<1 THEN 2630
2350 IF F1/2=INT(F1/2) THEN 2630
2360 IF F1>13 THEN 2630
2370 IF G1>12 THEN 2630
2380 IF G1/2 <>INT(G1/2) THEN 2630
2390 IF F1<>INT(F1) THEN 2630
2400 IF G1<1 THEN 2630
2410 IF F=F1 THEN 2530
2420 IF G<>G1 THEN 2630
2430 IF ABS(F-F1)<>2 THEN 2630:REM PRINT ERROR
2440 IF F>F1 THEN 2490
2450 IF O(F,G)=2 THEN 2630
2460 IF O(F,G)=3 THEN 2630
2470 O(F,G)=2
2480 GOTO 2700:REM RETURN
2490 IF O(F1,G1)=2 THEN 2630
2500 IF O(F1,G1)=3 THEN 2630
2510 O(F1,G1)=2
2520 GOTO 2700: REM RETURN
2530 IF ABS(G-G1)<>2 THEN 2630:REM PRINT ERROR
2540 IF G>G1 THEN 2590
2550 IF X(F-1,G+1)=2 THEN 2630
2560 IF X(F-1,G+1)=3 THEN 2630
2570 X(F-1,G+1)=3
2580 GOTO 2700:REM RETURN
2590 IF X(F1-1,G1+1)=2 THEN 2630
2600 IF X(F1-1,G1+1)=3 THEN 2630
2610 X(F1-1,G1+1)=3
2620 GOTO 2700:REM RETURN
2630 PRINT"INVALID MOVE -- TRY AGAIN"
2640 PRINT
2650 PRINT"YOUR MOVE FROM";
2660 INPUT F,G
2670 PRINT"TO";
2680 INPUT F1,G1
2690 GOTO 2220
2700 RETURN
2710 REM PLAYER WIN ROUTINE ---------
2720 FOR H=1 TO 11 STEP 2
2730 I=12
2740 IF X(I,H)=3 THEN 2770
2750 NEXT H
2760 GOTO 3000
2770 FOR  J=1 TO 11 STEP 2
2780 I=2
2790 IF X(I,J)=3 THEN 2820
2800 NEXT J
2810 GOTO 3000
2820 I=I+2
2830 IF I=12 THEN 2970
2840 IF X(I,J)=3 THEN 2910
2850 IF X(I+1,J+1)=2 THEN 2930
2860 IF J-1<0 THEN 2890
2870 IF X(I-1,J-1)=2 THEN 2950
2880 IF O(I+1,J+1)=2 THEN 2930
2890 IF J-1<0 THEN 3000
2900 GOTO 2808
2910 I=I+2
2920 GOTO 2830
2930 J=J+2
2940 GOTO 2830
2950 J=J-2
2960 GOTO 2830
2970 IF O(1,2)<>2 THEN 3000
2980 PRINT"YOU WIN !!! CONGRATULATIONS!!!"
2990 E=5
3000 RETURN
3010 END
10200 STOP
```

Camel(낙 타)

200마일이나 되는 고비 사막의 횡단. 목숨을 건 대 모험이다. 이글거리며 내리쬐는 태양, 가도가도 끝없는 열사(熱砂)……. 그뿐인가, 피그미족들이 뒤를 쫓는다. 그런데, 플레이어가 가진 것이라고는 1쿼터의 물(6일분)뿐. 도중에 오아시스를 발견하거나 다른 여행자를 만나거나 하면, 그 때마다 반 쿼터씩의 물을 얻을 수 있다. 사막을 여행하는 데에는 수많은 고난이 따른다. 무서운 모래바람이 휘몰아치기도 하고, 야만적인 베르베인이 나타나는가 하면, 낙타가 부상당하기도 한다. 이러한 모든 고난을 이겨내고 무사히 200마일을 횡단한다는 것은 기적에 가깝다 할 수 있다.

This game was submitted by the Heath Users Group. .

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RUN
                    CAMEL
              CREATIVE COMPUTING
             MORRISTOWN, NEW JERSEY


WOULD YOU LIKE INSTRUCTIONS? YES   설명이 필요합니까?

   WELCOME TO CAMEL.  THE OBJEST IS TO TRAVEL
200 MILES ACROSS THE GREAT GOBI DESERT.
A TRIBE OF KNOCKED KNEED PIGMIES WILL BE CHASING YOU.
YOU WILL BE ASKED FOR COMMANDS EVERY SO OFTEN.


C O M M A N D S :
#1 DRINK FROM YOUR CANTEEN  물통의 물을 마신다.
#2 AHEAD MODERATE SPEED   보통 속도로 전진한다.
#3 AHEAD FULL SPEED      전속력으로 전진한다.
#4 STOP FOR THE NIGHT  밤이 되었으니 정지.
#5 STATUS CHECK       상태 점검.
#6 HOPE FOR HELP    하늘의 도움을 기다린다.


YOU HAVE ONE QUART OF WATER WHICH WILL LAST YOU SIX DRINKS.
YOU HAVE RENEW YOUR WATER SUPPLY COMPLETELY AT AN OASES.
YOU GET A HALF A QUART IF FOUND BY HELP.
IF HELP DOES NOT FIND YOU AFTER COMMAND SIX, YOU LOSE.
GOOD LUCK AND GOOD CAMELING !! 행운을 빕니다.        당신은 사막 가운데의
YOU ARE IN THE MIDDLE OF THE DESERT AT AN OASIS. ↗ 오아시스에 있습니다.
YOU HAVE TRAVELLED  0  MILES ALLTOGETHER. 0마일 여행했습니다.
WHAT IS YOUR COMMAND? 3    코맨드는?
YOUR CAMEL IS BURNING ACROSS THE DESERT SANDS.  사막 횡단 중에
                                                낙타가 목이 마릅니다.
YOU HAVE TRAVELLED  6  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 3    코맨드는 ?
YOUR CAMEL IS BURNING ACROSS THE DESERT SANDS.

----------W A R N I N G---------- GET A DRINK  경고. 물을 마시십시오.
YOU HAVE TRAVELLED  8  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 4
YOUR CAMEL THANKS YOU!           ↗ 피그미족에게 잡혔습니다.
THE PYGMIES HAVE CAPTURED YOU.  CAMEL AND PEOPLE SOUP IS
THEIR FAVORITE DISH !!!!!    낙타와 사람은 그들이 좋아하는 먹이!

WANT A NEW CAMEL AND A NEW GAME ? Y   다시 하겠읍니까?
GOOD LUCK AND GOOD CAMELING !!
YOU ARE IN THE MIDDLE OF THE DESERT AT AN OASIS.
YOU HAVE TRAVELLED  0  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 3
YOUR CAMEL IS BURNING ACROSS THE DESERT SANDS.

YOU HAVE TRAVELLED  6  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 2
YOUR CAMEL LIKES THIS PACE.    낙타는 이 페이스를 좋아합니다.
----------W A R N I N G---------- GET A DRINK
YOU HAVE TRAVELLED  8  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 1
BETTER WATCH FOR AN OASES !  오아시스를 찾는 것이 좋겠읍니다.
WHAT IS YOUR COMMAND? 2      모래 폭풍을 만났읍니다…… 행운!
YOU HAVE BEEN CAUGHT IN A SANDSTORM.....GOOD LUCK!
YOUR NEW POSITION IS  12  MILES SO FAR!  12마일이나 날려왔읍니다!
YOUR CAMEL LIKES THIS PACE.
THE PYGMIES ARE  10  MILES BEHIND YOU. 피그미족이 10마일 뒤에 있읍니다.
YOU HAVE TRAVELLED  20  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 3                          낙타가 죽었읍니다!
YOU DIRTY RAPSCALLION! YOU RAN YOUR POOR CAMEL TO DEATH !!
YOU DIED IN THE DESERT.  당신도 쓰러졌읍니다.
YOUR BODY WAS EATEN BY VULTURES AND IMPORTED CANNINBALS !!!


WANT A NEW CAMEL AND A NEW GAME ? Y
GOOD LUCK AND GOOD CAMELING !!
YOU ARE IN THE MIDDLE OF THE DESERT AT AN OASIS.
YOU HAVE TRAVELLED  0  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 2
YOU HAVE ARRIVED AT AN OASES--------YOUR CAMEL IS  오아시스에 왔읍니다.
FILLING YOUR CANTEEN AND EATING FIGS.              낙타는 물통에 물을
YOUR CAMEL LIKES THIS PACE.                        가득 채우고 무화과를
YOU HAVE TRAVELLED  3  MILES ALLTOGETHER.          먹고 있읍니다.
WHAT IS YOUR COMMAND? 2
YOUR CAMEL LIKES THIS PACE.
YOU HAVE TRAVELLED  11  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 2
YOUR CAMEL LIKES THIS PACE.
----------W A R N I N G---------- GET A DRINK
THE PYGMIES ARE  7  MILES BEHIND YOU.
YOU HAVE TRAVELLED  14  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 1
BETTER WATCH FOR AN OASES !
WHAT IS YOUR COMMAND? 2
YOUR CAMEL HURT HIS HUMP.  낙타의 혹을 다쳤읍니다.
LUCKILY THE PYGMIES WERE FOOTWEARY !! 행운. 피그미족의 다리는 피로해
YOUR CAMEL LIKES THIS PACE.           있읍니다.
THE PYGMIES ARE  11  MILES BEHIND YOU.
YOU HAVE TRAVELLED  21  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 2
YOUR CAMEL LIKES THIS PACE.
THE PYGMIES ARE  15  MILES BEHIND YOU.
YOU HAVE TRAVELLED  28  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 2
YOU HAVE ARRIVED AT AN OASES--------YOUR CAMEL IS
FILLING YOUR CANTEEN AND EATING FIGS.
YOUR CAMEL LIKES THIS PACE.
THE PYGMIES ARE  13  MILES BEHIND YOU.
YOU HAVE TRAVELLED  37  MILES ALLTOGETHER.            야만적인 베르베르인이
WHAT IS YOUR COMMAND? 2                               모래 속에 숨어 있다가
WILD BERBERS HIDDEN IN THE SAND HAVE CAPTURED YOU.    당신을 잡았읍니다.
LUCKILY THE LOCAL SHEIK HAS AGREED TO THEIR RANSOM    행운. 그 지방의 추장이
DEMANDS.......BUT........WATCH FOR THE PYGMIES !!!    해방시켜 주었읍니다.
YOU HAVE A NEW CHOICE OF SUB-COMMANDS:                그런데…… 피그미족에게
#7 ATTEMPT AN ESCAPE  #7 도망을 시도                  발견되었읍니다!
#8 WAIT FOR PAYMENT   #8 해방을 기대
YOUR SUB-COMMAND ? 7                   ↳ 보조 코맨드를 주겠읍니다.
CONGRADULATIONS, YOU SUCCESSFULLY ESCAPED !!!!  축하합니다.
THE PYGMIES ARE  4  MILES BEHIND YOU.           도망에 성공했읍니다.
YOU HAVE TRAVELLED  37  MILES ALLTOGETHER.
WHAT IS YOUR COMMAND? 6
YOU DIED IN THE DESERT.
THE LOCAL SHEIK NOW USES YOUR SKULL FOR A CHANGE PURSE !!!


WANT A NEW CAMEL AND A NEW GAME ? NO   다시 하겠읍니까?
-----------------
      CHICKEN
-----------------
Ok
```

```
10 PRINT TAB( 26);"CAMEL"
20 PRINT TAB( 20);"CREATIVE COMPUTING"
30 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
35 PRINT:PRINT:PRINT
110 PRINT "WOULD YOU LIKE INSTRUCTIONS";
120 INPUT D$
130 IF LEFT$(D$,1)="N" THEN 320
140 PRINT CHR$(26);"   WELCOME TO CAMEL.  THE OBJEST IS TO TRAVEL"
150 PRINT "200 MILES ACROSS THE GREAT GOBI DESERT."
160 PRINT "A TRIBE OF KNOCK-KNEED PIGMIES WILL BE CHASING YOU."
170 PRINT "YOU WILL BE ASKED FOR COMMANDS EVERY SO OFTEN."
180 PRINT
210 PRINT "C O M M A N D S :"
211 PRINT "---------------"
220 PRINT "#1 - DRINK FROM YOUR CANTEEN"
230 PRINT "#2 - AHEAD MODERATE SPEED"
240 PRINT "#3 - AHEAD FULL SPEED"
250 PRINT "#4 - STOP FOR THE NIGHT"
260 PRINT "#5 - STATUS CHECK"
270 PRINT "#6 - HOPE FOR HELP"
275 PRINT
280 PRINT "   YOU HAVE ONE QUART OF WATER WHICH WILL LAST YOU SIX DRINKS."
290 PRINT "YOU MAYE RENEW YOUR WATER SUPPLY COMPLETELY AT AN OASES."
300 PRINT "YOU GET A HALF A QUART IF FOUND BY HELP."
310 PRINT "IF HELP DOES NOT FIND YOU AFTER COMMAND SIX, YOU LOSE."
320 PRINT "GOOD LUCK AND GOOD CAMELING !!"
325 PRINT
330 PRINT "YOU ARE IN THE MIDDLE OF THE DESERT AT AN OASIS."
335 GOSUB 2000
340 IF C>199 THEN 1210
350 Z=Z-1
355 IF Z=1 THEN PRINT "---------- W A R N I N G ---------- GET A DRINK"
360 IF Z<0 THEN 1630
370 P=P+1
380 X2=INT(10*RND(1)+2.5)
390 IF Q>0 THEN 940
400 IF P<4 THEN 470
410 C1=C1+X2
420 IF C1<C THEN 460
430 PRINT "THE PYGMIES HAVE CAPTURED YOU.  CAMEL AND PEOPLE SOUP IS"
440 PRINT "THEIR FAVORITE DISH !!!!!"
450 GOTO 1560
460 PRINT "THE PYGMIES ARE"C-C1;"MILES BEHIND YOU."
470 PRINT "YOU HAVE TRAVELLED";C;"MILES ALTOGETHER."
480 PRINT "WHAT IS YOUR COMMAND";
490 INPUT Y
500 ON Y GOTO 830,610,680,760,790
550 T=INT(10*RND(1))
560 IF T<>1 THEN 1200
570 PRINT "HELP HAS FOUND YOU IN A STATE OF UNCONSCIOUSNESS."
580 S=3
590 Z=4
600 GOTO 340
610 F=F+1
620 IF F=8 THEN 1190
630 GOSUB 880
640 X1=INT(10*RND(1))
650 C=C+X1
660 PRINT "YOUR CAMEL LIKES THIS PACE."
670 GOTO 340
680 F=F+3
690 IF F>7 THEN 1190
700 GOSUB 880
710 X1=2*INT(10*RND(1))
720 C=C+X1
730 PRINT "YOUR CAMEL IS BURNING ACROSS THE DESERT SANDS."
740 PRINT
750 GOTO 340
760 PRINT "YOUR CAMEL THANKS YOU!"
770 F=0
780 GOTO 350
790 PRINT "YOUR CAMEL HAS";7-F;"GOOD DAYS LEFT."
800 PRINT "YOU HAVE";S;"DRINKS LEFT IN YOUR CANTEEN."
810 PRINT "YOU CAN GO";Z;"COMMANDS WITHOUT DRINKING."
830 S=S-1
840 IF S<0 THEN 1200
850 PRINT "BETTER WATCH FOR AN OASES !"
860 Z=4
870 GOTO 480
880 A=INT(100*RND(1))
890 IF A>5 THEN 1120
900 PRINT "WILD BERBERS HIDDEN IN THE SAND HAVE CAPTURED YOU."
910 PRINT "LUCKILY THE LOCAL SHEIK HAS AGREED TO THEIR RANSOM-"
920 PRINT "DEMANDS.......BUT........WATCH FOR THE PYGMIES !!!"
930 PRINT "YOU HAVE A NEW CHOICE OF SUB-COMMANDS:"
940 PRINT "#7 - ATTEMPT AN ESCAPE"
950 PRINT "#8 - WAIT FOR PAYMENT"
960 PRINT "YOUR SUB-COMMAND ";
970 INPUT X
980 IF X=8 THEN 1060
990 X1=INT(10 * RND(1))
1000 IF X1<5 THEN 1040
1010 PRINT "CONGRATULATIONS, YOU SUCCESSFULLY ESCAPED !!!!"
1020 Q=0
1030 GOTO 340
1040 PRINT "YOU WERE MORTALLY WOUNDED BY A PIG STABBER WHILE ESCAPING."
1050 GOTO 1410
1060 X1=INT(100*RND(1))
1070 REM
1080 IF X1>24 THEN 1100
1090 PRINT "YOUR RANSOM HAS BEEN PAID AND YOU ARE FREE TO GO."
1095 Q=0
1096 GOTO 340
1100 PRINT "THE LOCAL SULTAN IS COLLECTING......JUST WAIT......."
1110 GOTO 340
1120 A=INT(10*RND(1))
1130 IF A>2 THEN 1240
1140 PRINT "YOU HAVE ARRIVED AT AN OASES -------- YOUR CAMEL IS"
1150 PRINT "FILLING YOUR CANTEEN AND EATING FIGS."
1160 Z=4
1170 S=6
1180 RETURN
1190 PRINT "YOU DIRTY RAPSCALLION! YOU RAN YOUR POOR CAMEL TO DEATH !!"
1200 GOTO 1410
1210 PRINT "YOU WIN, A PARTY IS BEING GIVEN IN YOUR HONOR......"
1220 PRINT "......THE PYGMIES ARE PLANNING TO ATTEND......"
1230 GOTO 1560
1240 X1=INT(100*RND(1))
1250 IF X1>5 THEN 1350
1260 PRINT "YOU HAVE BEEN CAUGHT IN A SANDSTORM....GOOD LUCK!"
1270 X5=INT(10*RND(1))
1280 X6=INT(10*RND(1))
1290 IF X6<5 THEN 1320
1300 C=C+X5
1310 GOTO 1330
1320 C=C-X5
1330 PRINT "YOUR NEW POSITION IS";C;"MILES SO FAR!"
1340 RETURN
1350 X1=INT(100*RND(1))
1360 IF X1>5 THEN RETURN
1370 C1=C1+1
1380 PRINT "YOUR CAMEL HURT HIS HUMP."
1390 PRINT "LUCKILY THE PYGMIES WERE FOOTWEARY !!!"
1400 RETURN
1410 U=INT(10*RND(1))
1420 PRINT "YOU DIED IN THE DESERT."
1430 IF U>1 THEN 1460
1440 PRINT "THE NATIONAL CAMEL'S UNION IS NOT ATTENDING YOUR FUNERAL!!!"
1450 GOTO 1560
1460 IF U>3 THEN 1490
1470 PRINT "YOUR BODY WAS EATEN BY VULTURES AND IMPORTED CANNIBALS !!!"
1480 GOTO 1560
1490 IF U>5 THEN 1520
1500 PRINT "THE LOCAL SHEIK NOW USES YOUR SKULL FOR A CHANGE PURSE !!!"
1510 GOTO 1560
1520 IF U>7 THEN 1550
1530 PRINT "PEOPLE WITH LITTLE INTELLIGENCE SHOULD STAY OUT OF THE DESERT !!!"
1540 GOTO 1560
1550 PRINT "TURKEYS SHOULD FLY, NOT RIDE CAMELS !!!!!!!"
1560 PRINT
1570 PRINT
1580 PRINT "WANT A NEW CAMEL AND A NEW GAME ";
1590 INPUT D$
1600 IF LEFT$(D$,1)="Y" THEN 320
1620 GOTO 1650
1630 PRINT "YOU RAN OUT OF WATER......SORRY CHUM!!!"
1640 GOTO 1410
1650 PRINT "-----------------"
1655 PRINT "     CHICKEN"
1657 PRINT "-----------------"
1660 END
2000 Z=4
2010 S=6
2020 C=0
2030 C1=0
2040 Q=0
2050 F=0
2060 P=0
2070 RETURN
```

Chase (도망자)

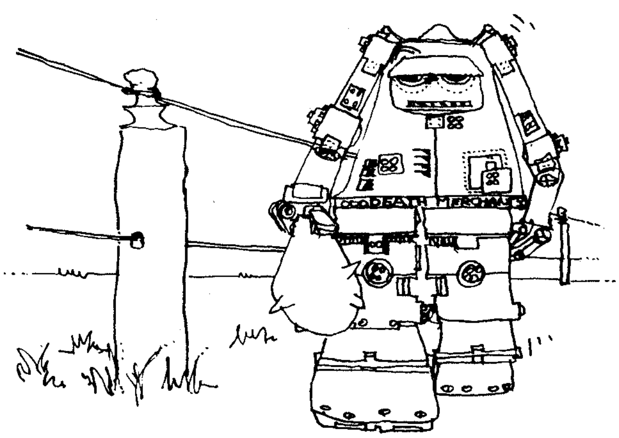
당신은, 철조망으로 둘러싸인 미로에서 목숨을 건 탈출을 시도하고 있다. 철조망에는 고압 전류가 흐르고 있다. 그뿐인가, 미로 안에는 당신의 탈출을 방해하는 로보트가 다섯이나 있어, 당신이 로보트에게 잡히면(닿으면) 그대로 게임이 끝난다(물론 당신은 저세상으로).

당신이 살 수 있는 길은, 로보트끼리를 충돌시키거나, 또는 고압 전류가 흐르는 벽에 충돌시켜 로보트를 파괴해 버리는 길밖에 없다.

만약 당신이 살 가망이 전혀 없는 장소에 있다고 깨달았다면, 있는 힘을 다해 원하는 곳으로 뛸 수 있다.

게임이 끝나면, 처음과 똑같은 설정으로 플레이할 수도 있고, 다른 설정으로 플레이할 수도 있다.

I believe this game was originally created by Mac Oglesby. It was then modified by Bill Cotter and further improved by Arnold Loveridge. An intermediate version appeared in *Creative Computing*, Jan/Feb 1976.



```
RUN
                    CHASE
              CREATIVE COMPUTING
             MORRISTOWN, NEW JERSEY


YOU ARE WITHIN THE WALLS OF A HIGH VOLTAGE MAZE
THERE ARE FIVE SECURITY MACHINES TRYING TO DESTROY YOU
YOU ARE THE '*'   THE INTERCEPTORS ARE THE '+'       * ...... 당신
THE AREAS MARKED 'X' ARE HIGH VOLTAGE                + ...... 로보트
YOUR ONLY CHANCE FOR SURVIVAL IS TO MANEUVER EACH    X ...... 고압 전류가
INTERCEPTOR INTO AN 'X'.-----GOOD LUCK-----                   흐르는 벽
MOVES ARE   7.8.9
            4.*.6
            1.2.3

10 = NO MOVE FOR THE REST OF THE GAME  휴식
-1 = GAVE UP, SITUATION HOPELESS. 포기, 절망적인 위치.
 0 = A TREMENDOUS (BUT UNFORTUNATELY RANDOM) LEAP 힘껏 뛴다.

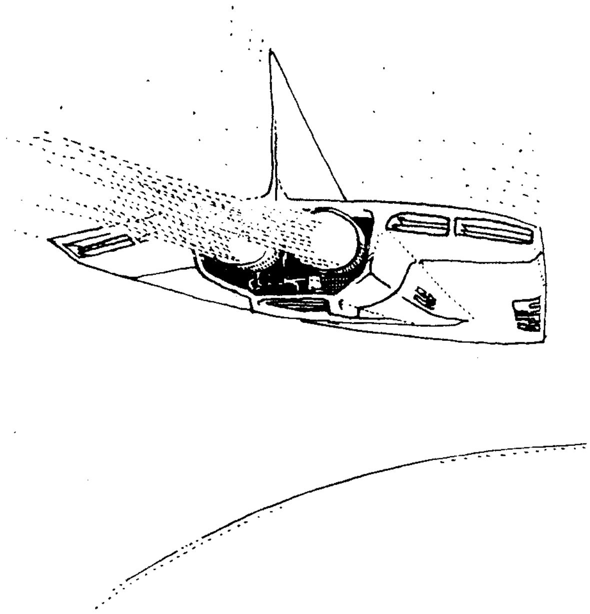
XXXXXXXXXXXXXXXXXXXX
X             X   XX
X X +     X  X     X
X          X X     X
X              X   X
X   X  +     X   + X
X X    X  X  XXX   X
XX      XX  +      X
X   *   X       +  X
XXXXXXXXXXXXXXXXXXXX
? 5
XXXXXXXXXXXXXXXXXXXX
X             X   XX
X X       X  X     X
X  +       X X     X
X              X   X
X   X        X     X
X X   +X  X  XXX+  X
XX      XX         X
X   *   X  +   +   X
XXXXXXXXXXXXXXXXXXXX
? 5
XXXXXXXXXXXXXXXXXXXX
X             X   XX
X X       X  X     X
X          X X     X
X  +           X   X
X   X        X     X
X X    X  X  XXX   X
XX   + XX      +   X
X   *   X +   +    X
XXXXXXXXXXXXXXXXXXXX
? 5
XXXXXXXXXXXXXXXXXXXX
X             X   XX
X X       X  X     X
X          X X     X
X              X   X
X  +X        X     X
X X    X  X  XXX   X
XX      XX         X
X  *+   X+   ++    X
XXXXXXXXXXXXXXXXXXXX
? 4
XXXXXXXXXXXXXXXXXXXX
X             X   XX
X X       X  X     X
X          X X     X
X              X   X
X   X        X     X
X X    X  X  XXX   X
XX      XX         X
X *+    X   ++     X
XXXXXXXXXXXXXXXXXXXX
? 0
$6,000,000 JUMP!!!
HIGH VOLTAGE!!!!!!!!!!
***** ZAP *****  YOU'RE DEAD!!! 아, 당신이 죽었읍니다!

ANOTHER GAME (Y/N)? N     다시 한 번 하겠읍니까 ?
```

```
5 PRINT CHR$(26)
10 PRINT TAB( 26);"CHASE"
20 PRINT TAB( 20);"CREATIVE COMPUTING"
30 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
40 PRINT:PRINT:PRINT
41 PRINT "YOU ARE WITHIN THE WALLS OF A HIGH VOLTAGE MAZE"
42 PRINT "THERE ARE FIVE SECURITY MACHINES TRYING TO DESTROY YOU"
60 PRINT "YOU ARE THE '*'   THE INTERCEPTORS ARE THE '+'"
70 PRINT "THE AREAS MARKED 'X' ARE HIGH VOLTAGE"
80 PRINT "YOUR ONLY CHANCE FOR SURVIVAL IS TO MANEUVER EACH"
90 PRINT "INTERCEPTOR INTO AN 'X'. -----GOOD LUCK-----"
100 PRINT "MOVES ARE   7.8.9"
110 PRINT "            4.*.6"
120 PRINT "            1.2.3"
130 PRINT
140 PRINT "10 = NO MOVE FOR THE REST OF THE GAME"
150 PRINT "-1 = GAVE UP, SITUATION HOPELESS."
160 PRINT " 0 = A TREMENDOUS (BUT UNFORTUNATELY RANDOM) LEAP"
170 PRINT
175 LINE INPUT "ENTER 'RETURN' TO START THE GAME. ";XX$
180 DIM A(10,20),A1(10,20),N(12),L(5),M(5),L1(5),M1(5)
190 REM
210 FOR B=1 TO 10
220 FOR C=1 TO 20
230 X=INT(10*RND(1))
240 IF X=5 THEN 270
250 A(B,C)=ASC(" ")
260 GOTO 280
270 A(B,C)=ASC("X")
280 NEXT C
290 NEXT B
300 FOR D=1 TO 10
310 A(D,1)=ASC("X"):A(D,20)=ASC("X")
320 NEXT D
330 FOR F=1 TO 20
340 A(1,F)=ASC("X"):A(10,F)=ASC("X")
350 NEXT F
360 GOTO 410
370 H=INT(2+8*RND(1))
380 I=INT(2+18*RND(1))
390 IF A(H,I)<>ASC(" ") THEN 370
400 RETURN
410 GOSUB 370
420 A(H,I)=ASC("*")
430 J=H:K=I
440 FOR N9=1 TO 5
450 GOSUB 370
460 A(H,I)=ASC("+")
470 L(N9)=H:M(N9)=I
480 NEXT N9
490 FOR B1=1 TO 10:FOR B2=1 TO 20:A1(B1,B2)=A(B1,B2):NEXT B2:NEXT B1
500 FOR B1=1 TO 5:L1(B1)=L(B1):M1(B1)=M(B1):NEXT B1
520 J1=J:K1=K
530 Y9=0
540 PRINT CHR$(26):PRINT "MOVES ARE  7.8.9";TAB( 25);
542 PRINT"10 = NO MORE MOVES":PRINT TAB( 12);"4.*.6";TAB( 25);"-1 = GIVE UP"
544 PRINT TAB( 12);"1.2.3";TAB( 26);"0 = RANDOM LEAP":PRINT:PRINT
546 FOR D2=1 TO 10
550 FOR B2=1 TO 20
560 N$=CHR$(A(D2,B2))
570 PRINT N$;
580 NEXT B2
590 PRINT
600 NEXT D2
610 IF Y9 <> 10 THEN 640
620 PRINT
630 GOTO 890
640 PRINT:INPUT Y9:PRINT
650 J2=J:K2=K
660 IF Y9=0 THEN 860
670 IF Y9 < 0 THEN 1230
680 IF Y9=10 THEN 1070
690 ON Y9 GOTO 820,800,780,840,890,760,700,720,740
700 J=J-1:K=K-1
710 GOTO 890
720 J=J-1
730 GOTO 890
740 J=J-1:K=K+1
750 GOTO 890
760 K=K+1
770 GOTO 890
780 J=J+1:K=K+1
790 GOTO 890
800 J=J+1
810 GOTO 890
820 J=J+1:K=K-1
830 GOTO 890
840 K=K-1
850 GOTO 890
860 PRINT "$6,000,000 JUMP!!!"
870 J=INT(2+8*RND(1))
880 K=INT(2+18*RND(1))
890 IF A(J,K)=ASC("X") THEN 1260
900 A(J2,K2)=ASC(" ")
910 A(J,K)=ASC("*")
920 GOTO 1070
930 REM INTERCEPTOR MOVEMENT
940 IF A(X,Y)=ASC("X") THEN 1040
950 X2=X:Y2=Y
960 X=SGN(J-X):Y=SGN(K-Y)
970 X=X+X2:Y=Y+Y2
980 IF A(X,Y)=ASC("*") THEN 1050
990 IF A(X,Y)=ASC(" ") THEN 1020
1000 A(X2,Y2)=ASC(" ")
1010 RETURN
1020 A(X,Y)=ASC("+")
1030 A(X2,Y2)=ASC(" ")
1040 RETURN
1050 G9=99
1060 RETURN
1070 FOR N9=1 TO 5
1080 X=L(N9):Y=M(N9)
1090 G9=0
1100 GOSUB 940
1110 IF G9 <> 0 THEN 1240
1120 L(N9)=X:M(N9)=Y
1130 NEXT N9
1140 FOR N9=1 TO 5
1150 IF A(L(N9),M(N9)) <> ASC(" ") THEN 1170
1160 A(L(N9),M(N9))=ASC("+")
1170 NEXT N9
1180 FOR N9=1 TO 5
1190 IF A(L(N9),M(N9)) <> ASC("X") THEN 540
1200 NEXT N9
1210 PRINT:PRINT "YOU HAVE DESTROYED ALL YOUR OPPONENTS - THE GAME IS YOURS"
1220 GOTO 1290
1230 PRINT:PRINT "GIVE UP, EH."
1240 PRINT:PRINT "*** YOU HAVE BEEN DESTROYED BY A LUCKY COMPUTER ***"
1250 GOTO 1290
1260 PRINT:PRINT "HIGH VOLTAGE!!!!!!!!!!"
1270 PRINT "***** ZAP *****  YOU'RE DEAD!!!"
1280 PRINT
1290 PRINT:PRINT  "ANOTHER GAME (Y/N)";
1300 INPUT N9$
1310 IF N9$ <> "Y" THEN 1400
1320 PRINT "SAME SETUP (Y/N)";
1330 INPUT N9$
1340 IF N9$ <> "Y" THEN 190
1350 FOR B1=1 TO 10:FOR B2=1 TO 20:A(B1,B2)=A1(B1,B2):NEXT B2:NEXT B1
1360 FOR B1=1 TO 5:L(B1)=L1(B1):M(B1)=M1(B1):NEXT B1
1380 J=J1:K=K1
1390 GOTO 530
1400 END
```

Close Encounters

(미지와의 만남)



공격해 오는 UFO를 방어하는 게임이다. 플레이어의 방위 사령부는 좌표 (0,0)의 위치에 있다. 플레이어에게는 UFO의 좌표 위치, 속도 등의 진로 데이터가 주어진다.

당신은, ICBM으로 대기권 밖에서도 UFO를 요격하는 방법(A)과, 또는 아무것도 하지 않고 대기 마찰에 의해 UFO의 진로가 벗어나거나 마찰열로 소멸되는 것을 기다리는 방법(B) 중 어느 한 쪽을 선택할 수 있다.

이 게임에서는, 좌표에 관한 수학적 지식이 큰 위력을 발휘한다. 몇 번 게임을 하고 나면, 이렇게 싸우면 좋겠다 하는 전략적인 것을 알 수 있을 것이다.

This program was originally written by Chris Falco.

```
RUN
                    CLOSE ENCOUNTERS
                    CREATIVE COMPUTING
                  MORRISTOWN, NEW JERSEY

 당신은 (0, 0)에 있읍니다.
YOU ARE SITUATED AT COORDINATES (0,0).  A UFO IS  UFO는 그 곳을 향해
HEADING FOR IMPACT AT THAT LOCATION.                공격해 옵니다.
                      ↗ UFO는 경도 55°, 위도 133°자리에 있읍니다.
AT FIRST TRACK, THE UFO IS ON A COURSE OF 55 DEGREES LONGITUDE
AND 133 DEGREES LATITUDE.                (스피드는 2562마일 /h )
   (ALSO IT'S FALLING AT A SPEED OF 2562 MILES/PER HOUR)
YOU HAVE THE FOLLOWING ALTERNATIVES:                UFO를 공중에서
A) YOU CAN ATTEMPT TO SHOOT THE UFO OUT OF THE SKY.  OR   추격한다.
B) YOU CAN DO NOTHING, AND HOPE THAT AIR FRICTION
   WILL CAUSE THE COURSF OF THE UFO TO DEVIATE, AND THUS
   MISS YOUR LOCATION.  아무것도 하지 않고, 대기 마찰에 의해 UFO의 진로가
                        벗어나거나, 마찰열로 소멸되기를 기다린다.
WHAT IS YOUR PLAN OF ACTION (A OR B)? B
           ↖ A나 B 중 어느 것으로 할 계획입니까?
MILES 거리     SPEED 속도    LONGITUDE 경도  LATITUDE 위도  COURSE 코스
-----          -----         ---------       --------       ------
 12000          2562          55              133            82
 11857.2        8569          52              130            94
 11654.7        12148         51              128            93
 11348.6        18367         51              119            84
 10945.5        24186         42              118            92
 10485.7        27587         37              117            96
 9989.48        29774         32              110            94
 9376.64        36771         24              107            99
 8697.39        40755         20              107            103
 7977.35        43202         14              98             100
 7186.97        47423         6               94             104
 6301.64        53120         4               85             97
 5337.84        57828         -4              85             105
 4323.59        60855         -12             79             107
 3198.72        67492         -19             79             114
 2011.02        71262         -21             71             108
 770.118        74454         -27             65             108

---------IMPACT-AT- 78371 -MILES-PER-HOUR---------------
GOOD WORK.  FRICTION OF 5 % HAS CAUSED THE COURSE
OF THE UFO TO DEVIATE.  IMPACT COORDINATES ARE
NOW ( 5 ,-5 ).  YOU MADE IT!
```

```
TRY AGAIN? Y  다시 한 번 하겠읍니까?
PLAN (A OR B)? A


LAUNCH AN I.C.B.M. ON A COURSE THAT WILL INTERCEPT THE UFO
WITHOUT THE UFO BEING TOO CLOSE TO YOUR LOCATION.  IF THE SPEED
OF THE UFO EXCEEDS 10529 M.P.H., YOUR MISSILES ARE USELESS!
--SCANNERS PREDICT YOU HAVE 5 MINUTES TO DESTROY THE UFO
BEFORE IT IS TOO CLOSE TO IMPACT.

--COMPUTER INDICATES COURSE AT FIRST SIGHTING IS APPROX. 54

TYPE IN A COURSE ON THE CHART BELOW


TIME          SPEED          LONGITUDE      LATITUDE       COURSE
 0             2529           54             105            ? 60
 .5            4100           56             107            ? 55
YOU ARE SHY OF THE UFO'S COORDINATES,
HOWEVER THIS IS ONLY A SLIGHT DEVIATION SO THE
UFO HAS BEEN DESTROYED!   UFO가 파괴되었읍니다.

TRY AGAIN? YES
PLAN (A OR B)? A


--SCANNERS PREDICT YOU HAVE 2 MINUTES TO DESTROY THE UFO
BEFORE IT IS TOO CLOSE TO IMPACT.

--COMPUTER INDICATES COURSE AT FIRST SIGHTING IS APPROX. 77

TYPE IN A COURSE ON THE CHART BELOW


TIME          SPEED          LONGITUDE      LATITUDE       COURSE
 0             5122           47             113            ? 80
 .5            6597           41             107            ? 85
 1             8072           35             101            ? 90
 1.5           9547           29             95             ? 71
FANTASTIC!!!!  YOU HIT THE UFO EXACTLY ON PROJECTED COURSE
YOU MUST BE VERY SHARP!  놀랍습니다! 당신은 UFO를 정확하게 맞혔읍니다.
                         당신은 매우 명확합니다.
```

```
TRY AGAIN? YES
PLAN (A OR B)? B

MILES          SPEED          LONGITUDE      LATITUDE       COURSE
-----          -----          ---------      --------       ------
 12000          2802           58             108            54
 11857.3        8565           51             99             64
 11628.5        13726          51             93             58
 11356.7        16307          44             92             64
 11036.4        19219          37             88             67
 10606.8        25776          36             79             59
 10066.9        32396          36             78             58
 9482.08        35086          28             77             65
 8817.98        39846          19             75             72
 8090.73        43635          14             70             72
 7283.78        48417          14             64             66
 6400.58        52992          9              62             69
 5441.75        57530          0              59             75
 4375.52        63974         -2              50             68
 3256.52        67140         -8              47             71
 2048.63        72473         -14             44             74
 790.901        75464         -18             39             73

---------IMPACT-AT- 77572 -MILES-PER-HOUR---------------
GOOD WORK.  FRICTION OF 4 % HAS CAUSED THE COURSE
OF THE UFO TO DEVIATE.  IMPACT COORDINATES ARE
NOW ( 4 ,-4 ).  YOU MADE IT!
TRY AGAIN? Y
PLAN (A OR B)? B

MILES          SPEED          LONGITUDE      LATITUDE       COURSE
-----          -----          ---------      --------       ------
 12000          5782           56             112            58
 11787.4        12757          49             112            67
 11504.3        16983          46             112            70
 11114.7        23376          41             112            75
 10668.8        26756          41             108            71
 10171.8        29818          36             107            75
 9571.63        36012          35             103            72
 8887.7         41036          33             100            71
 8151.72        44159          31             96             69
 7375.72        46560          27             92             69
 6483.92        53508          20             87             71
 5495.93        59279          19             78             63
 4457.3         62318          18             74             60
 3331.95        67521          16             70             58
 2109.15        73368          10             62             56
 810.517        77918          5              55             54

---------IMPACT-AT- 80674 -MILES-PER-HOUR---------------
GOOD WORK.  FRICTION OF 6 % HAS CAUSED THE COURSE
OF THE UFO TO DEVIATE.  IMPACT COORDINATES ARE
NOW ( 6 ,-6 ).  YOU MADE IT!
TRY AGAIN? NO
Ok
```

```
100 PRINT TAB( 21);"CLOSE ENCOUNTERS"
110 PRINT TAB( 20);"CREATIVE COMPUTING"
120 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 GOSUB 1100
140 PRINT:PRINT
150 PRINT "YOU ARE SITUATED AT COORDINATES (0,0).  A UFO IS"
160 PRINT "HEADING FOR IMPACT AT THAT LOCATION."
170 PRINT
180 PRINT "AT FIRST TRACK, THE UFO IS ON A COURSE OF"Y"DEGREES ";
190 PRINT "LONGITUDE"
200 PRINT "AND"Z"DEGREES LATITUDE."
210 PRINT "   (ALSO IT'S FALLING AT A SPEED OF"X"MILES/PER HOUR)"
215 PRINT
220 PRINT "YOU HAVE THE FOLLOWING ALTERNATIVES:"
230 PRINT "A) YOU CAN ATTEMPT TO SHOOT THE UFO OUT OF THE SKY.  OR"
240 PRINT "B) YOU CAN DO NOTHING, AND HOPE THAT AIR FRICTION"
250 PRINT "   WILL CAUSE THE COURSE OF THE UFO TO DEVIATE, AND THUS"
260 PRINT "   MISS YOUR LOCATION.":PRINT
270 PRINT "WHAT IS YOUR PLAN OF ACTION (A OR B)";:INPUT D$
290 IF LEFT$(D$,1)="B" THEN 790
300 PRINT CHR$(26);"LAUNCH AN I.C.B.M. ON A COURSE THAT WILL INTERCEPT THE UFO"
310 PRINT "WITHOUT THE UFO BEING TOO CLOSE TO YOUR LOCATION.  IF THE ";
320 PRINT "SPEED"
330 PRINT "OF THE UFO EXCEEDS"H"M.P.H., YOUR MISSILES ARE USELESS!"
340 PRINT "--SCANNERS PREDICT YOU HAVE"M"MINUTES TO DESTROY THE UFO"
350 PRINT "BEFORE IT IS TOO CLOSE TO IMPACT.":PRINT
360 C=Z-Y+I-INT(RND(1)*4)+1
370 PRINT "--COMPUTER INDICATES COURSE AT FIRST SIGHTING IS APPROX.";C+F
380 PRINT
390 PRINT "TYPE IN A COURSE ON THE CHART BELOW:":PRINT
400 PRINT
410 PRINT "TIME","SPEED","LONGITUDE","LATITUDE","COURSE"
412 PRINT "----","-----","---------","--------","------"
420 FOR T=0 TO 5 STEP .5
430 PRINT USING "##.#        #,####.#            ###            ### ";T,X,Y,Z;
435 PRINT "",:INPUT A
440 IF T=INT(T) AND T=M THEN 620
450 IF X<=H THEN 490
460 PRINT "SORRY--THE SPEED OF THE UFO HAS EXCEEDED ";:PRINT USING "##,###";H;
465 PRINT " M.P.H."
470 PRINT "THIS SPEED IS TOO GREAT FOR YOUR DEFENSE SCREEN TO TRACK!"
480 PRINT "THEREFORE, YOU ARE DOOMED!":PRINT:GOTO 750
490 IF A=C THEN 720
500 IF A>10 THEN 550
510 PRINT "AT THAT COURSE, YOU SHOT YOUR MISSILE STRAIGHT UP, SO WHEN"
520 PRINT "IT RUNS OUT OF FUEL IN ABOUT"F"HOURS, IT WILL FALL";
530 PRINT " THROUGH"
540 PRINT "YOUR ROOF!!!!!!!!!!   GOODBYE!!!!!!":GOTO 660
550 IF A<200 GOTO 580
560 PRINT "GOOD WORK! THERE GOES THE MISSILE -------- RIGHT TOWARDS"
570 PRINT "RUSSIA!!!!  NOW YOU'RE DEFINITELY IN TROUBLE!!":GOTO 660
580 IF A=C-1 THEN 670
590 IF A=C+1 THEN 710
600 X=X+V+1200:Y=Y-I+5:Z=Z-I+5:C=Z-Y+5
610 NEXT T
620 PRINT:PRINT "------------------------ATTENTION------------------------"
630 PRINT "ELAPSED - TIME - INDICATES - THAT -";M; "- MINUTES - HAVE - PASSED."
640 PRINT"IF - YOU - WERE - TO - HIT - THE - UFO - NOW - THE - FORCE - OF"
650 PRINT"THE - EXPLOSION - WOULD - DESTROY - BOTH - YOU - AND - THE - UFO!"
655 PRINT
660 GOTO 750
670 PRINT "YOU ARE SHY OF THE UFO'S COORDINATES,"
680 PRINT "HOWEVER THIS IS ONLY A SLIGHT DEVIATION SO THE"
690 PRINT "UFO HAS BEEN DESTROYED!":PRINT
700 GOTO 750
710 PRINT "YOU OVERSHOT THE UFO'S COORDINATES,":GOTO 680
720 PRINT "FANTASTIC!!!!  YOU HIT THE UFO EXACTLY ON PROJECTED COURSE"
730 PRINT "YOU MUST BE VERY SHARP!":PRINT
740 PRINT
750 PRINT "TRY AGAIN";:INPUT J$:IF LEFT$(J$,1)="N" THEN 1220
760 GOSUB 1100
770 GOSUB 1070
780 PRINT:PRINT:GOTO 340
790 PRINT
800 F=0
810 A=INT(RND(1)*5)+1:C=Z-Y+A
820 M=12000
830 PRINT CHR$(26);"  MILES","SPEED","LONGITUDE","LATITUDE","COURSE"
840 PRINT "  -----","-----","---------","--------","------"
850 P=X+1
860 PU$= "##,###.#    ###,###            ###            ###          ##"
865 PRINT USING PU$;M,X,Y,Z,C
870 C=Z-Y
880 X=X+INT(RND(1)*5000)+2000:M=M-X/60
890 Y=Y-INT(RND(1)*10):Z=Z-INT(RND(1)*10):C=Z-Y+A^2
900 IF X-P>5700 THEN F=F+1
910 IF M>0 THEN 850
920 PRINT
930 PRINT "-------- IMPACT - AT - ";:PRINT USING "##,###";X;
935 PRINT " - MILES - PER - HOUR ----------"
940 IF F<=2 THEN 980
950 PRINT "GOOD WORK.  FRICTION OF";F;CHR$(8);"% HAS CAUSED THE COURSE"
960 PRINT "OF THE UFO TO DEVIATE.  IMPACT COORDINATES ARE"
970 PRINT "NOW ("F", "0-F").  YOU MADE IT!":GOTO 1020
980 PRINT"---------- UPI - WIRE - SERVICE -- ON - LINE -";A;":"A+5":"A+10":--"
990 PRINT "---  HAVE JUST OBSERVED EXPLOSION AT COORDINATES ("0-F", 0). -----"
1000 A=(A+2)*A
1010 PRINT "BLAST SEEN FROM"A^3"MILES AWAY.  NO SURVIVORS.":PRINT
1020 INPUT "TRY AGAIN";J$
1030 IF LEFT$(J$,1)="N" THEN 1220
1040 GOSUB 1100
1050 GOSUB 1070
1060 PRINT:PRINT:GOTO 300
1070 INPUT "PLAN (A OR B)";D$
1080 IF LEFT$(D$,1)="B" THEN 790
1090 RETURN
1100 I=INT(RND(1)*20)+1:V=INT(RND(1)*400)+200:F=INT(RND(1)*5)+1
1110 X=INT(RND(1)*5000)+2001:H=X+8000:Q=INT(RND(1)*5)+1
1120 Z=INT(RND(1)*140):IF Z<100 THEN 1120
1130 Y=INT(RND(1)*60):IF Y<40 THEN 1130
1140 IF X>=3000 THEN 1160
1150 M=5:GOTO 1210
1160 IF X>=3700 THEN 1180
1170 M=4:GOTO 1210
1180 IF X>=4700 THEN 1200
1190 M=3:GOTO 1210
1200 M=2
1210 RETURN
1220 END
```

Column (원기둥)

옛날부터 있던, 트럼프를 사용한 트릭(trick)을 컴퓨터 게임으로 만든 것이다. 딜러(dealer)는 임의의 카드 21장을 가지고 이것을 7장씩 3무더기로 나눈다. 플레이어는 자기 마음 속으로 정한 카드가 어느 무더기에 들어 있는지를 딜러에게 말한다. 그러면 딜러는 3무더기의 카드 중에서 오른쪽부터 카드를 한 장 취하여 왼쪽으로 옮기는 것 같은 일을 한다. 좀 더 자세히 설명하면, 오른쪽 카드 무더기 중에서 맨 위의 카드를 왼쪽 카드 무더기의 제일 위로 가져가고, 오른쪽 카드 무더기의 두 번째 카드를 가운데 카드 무더기의 제일 위로 가져가고…… 하는 식이다. 이와 같이 하여 21장의 카드를 모두 바꿔 놓은 다음, 딜러가 다시 플레이어에게 생각한 카드가 어디 있는지를 묻는다. 플레이어가 대답하면, 딜러는 다시 같은 동작을 반복하고, 또 어느 무더기에 문제의 카드가 있는지를 묻는다. 그에 플레이어가 대답하면, 불가사의하게도 딜러는 플레이어가 마음 속으로 정한 바로 그 카드를 알아맞힌다.

어떻게 이와 같은 것이 가능할까? 자세한 설명은 생략하겠지만, 컴퓨터에 이 프로그램을 입력하여 실행해 보라. 반드시 당신이 아무도 몰래 마음 속으로 정한 카드를 알아맞힐 것이다.

This program was originally written by Alan Barnes.

```
RUN
                              COLUMN
                        CREATIVE COMPUTING
                      MORRISTOWN, NEW JERSEY


THIS PROGRAM WILL SHOW YOU A CARD TRICK. AFTER THE FIRST DEAL
PICK A CARD AND TYPE THE NUMBER OF THE COLUMN CONTAINING IT.
THE DEALER WILL THEN PICK UP THE CARDS, A COLUMN AT A TIME,
AND WILL DEAL THEM OUT AGAIN HORIZONTALLY. WHEN HE FINISHES
EACH TIME, TYPE THE NUMBER OF THE THE NEW COLUMN CONTAINING YOUR
CARD. FOLLOWING THE LAST DEAL THE DEALER WILL TURN OVER THE
CARDS, ONE AT A TIME, UNTIL HE REACHES THE ONE YOU PICKED.

 9 OF CLUBS             JACK OF SPADES          6 OF HEARTS
 6 OF CLUBS             KING OF CLUBS           2 OF CLUBS
 4 OF HEARTS             3 OF HEARTS            5 OF SPADES
QUEEN OF SPADES          4 OF DIAMONDS          3 OF CLUBS
ACE OF DIAMONDS          10 OF SPADES           7 OF CLUBS
KING OF DIAMONDS         6 OF SPADES            10 OF HEARTS
QUEEN OF CLUBS           8 OF CLUBS             10 OF CLUBS

WHICH COLUMN CONTAINS YOUR CARD? 1  어느 컬럼에 당신의 카드가 있읍니까?


 6 OF HEARTS             2 OF CLUBS             5 OF SPADES
 3 OF CLUBS              7 OF CLUBS             10 OF HEARTS
 10 OF CLUBS             9 OF CLUBS             6 OF CLUBS
 4 OF HEARTS            QUEEN OF SPADES        ACE OF DIAMONDS
KING OF DIAMONDS        QUEEN OF CLUBS         JACK OF SPADES
KING OF CLUBS            3 OF HEARTS            4 OF DIAMONDS
 10 OF SPADES            6 OF SPADES            8 OF CLUBS

WHICH COLUMN CONTAINS YOUR CARD? 1

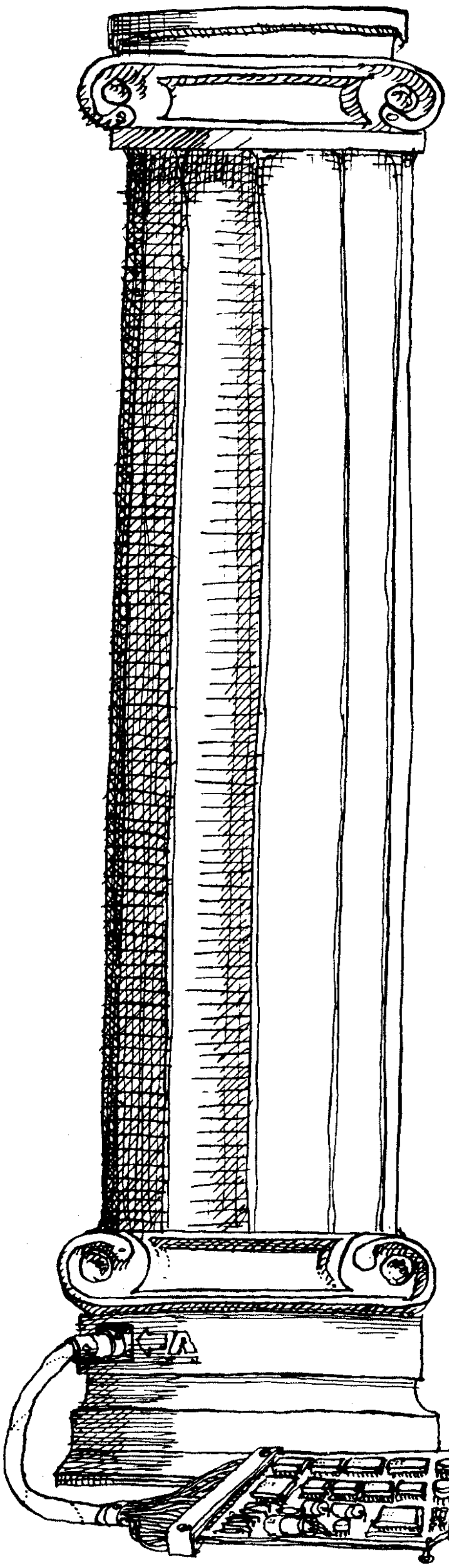

 5 OF SPADES             10 OF HEARTS           6 OF CLUBS
ACE OF DIAMONDS         JACK OF SPADES          4 OF DIAMONDS
 8 OF CLUBS              6 OF HEARTS            3 OF CLUBS
 10 OF CLUBS             4 OF HEARTS           KING OF DIAMONDS
KING OF CLUBS            10 OF SPADES           2 OF CLUBS
 7 OF CLUBS              9 OF CLUBS            QUEEN OF SPADES
QUEEN OF CLUBS           3 OF HEARTS            6 OF SPADES

WHICH COLUMN CONTAINS YOUR CARD? 2

 5 OF SPADES
ACE OF DIAMONDS
 8 OF CLUBS
 10 OF CLUBS
KING OF CLUBS
 7 OF CLUBS
QUEEN OF CLUBS
 10 OF HEARTS
JACK OF SPADES
 6 OF HEARTS
 4 OF HEARTS
 10 OF SPADES
 9 OF CLUBS
 3 OF HEARTS
 6 OF CLUBS
 4 OF DIAMONDS
 3 OF CLUBS
KING OF DIAMONDS
 2 OF CLUBS

OOPS!!! YOUR CARD IS THE  4 OF HEARTS.  당신의 카드는 하트 4입니다.
```

```
100 PRINT TAB( 26);"COLUMN"
110 PRINT TAB( 20);"CREATIVE COMPUTING"
120 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 PRINT:PRINT
140 PRINT "THIS PROGRAM WILL SHOW YOU A CARD TRICK. AFTER THE FIRST DEAL"
150 PRINT "PICK A CARD AND TYPE THE NUMBER OF THE COLUMN CONTAINING IT."
160 PRINT "THE DEALER WILL THEN PICK UP THE CARDS, A COLUMN AT A TIME,"
170 PRINT "AND WILL DEAL THEM OUT AGAIN HORIZONTALLY. WHEN HE FINISHES"
180 PRINT "EACH TIME, TYPE THE NUMBER OF THE THE NEW COLUMN CONTAINING YOUR"
190 PRINT "CARD. FOLLOWING THE LAST DEAL THE DEALER WILL TURN OVER THE"
200 PRINT "CARDS, ONE AT A TIME, UNTIL HE REACHES THE ONE YOU PICKED."
210 PRINT:PRINT
220 DIM A(21),B(21)
230 FOR X=1 TO 21
240 J=0
250 T=INT(52*(RND(1)))
270 FOR Y=1 TO X-1
280 IF A(Y)=T THEN 250
290 NEXT Y
300 A(X)=T
310 NEXT X
320 N=0
330 FOR I=1 TO 3
340 FOR Z=1 TO 21
350 IF A(Z)=4*(INT(A(Z)/4)) THEN 470
360 IF A(Z)-2=4*(INT(A(Z)/4)) THEN 440
370 IF A(Z)-3=4*(INT(A(Z)/4)) THEN 410
380 C$="SPADES"
390 D$=""
400 GOTO 490
410 C$="HEARTS"
420 D$=""
430 GOTO 490
440 C$="CLUBS"
450 D$=""
460 GOTO 490
470 C$="DIAMON"
480 D$="DS"
490 N=N+1
500 IF N <> 4 THEN 530
510 PRINT
520 N=1
530 IF A(Z) > 35 THEN 580
540 PRINT TAB((N-1)*25);INT(A(Z)/4)+2;"OF ";C$;D$;
550 IF J=5 THEN 900
560 IF J=10 THEN 980
570 GOTO 710
580 IF INT(A(Z)/4)=9 THEN 670
590 IF INT(A(Z)/4)=10 THEN 650
600 IF INT(A(Z)/4)=11 THEN 630
610 A$="JACK"
620 GOTO 680
630 A$="QUEEN"
640 GOTO 680
650 A$="KING"
660 GOTO 680
670 A$="ACE"
680 PRINT TAB((N-1)*25);A$;" OF ";C$;D$;
690 IF J=5 THEN 900
700 IF J=10 THEN 980
710 NEXT Z
720 PRINT:PRINT
730 PRINT "WHICH COLUMN CONTAINS YOUR CARD";
740 INPUT K
750 IF K<1 OR K > 3 THEN PRINT:PRINT "(1-3)":GOTO 730
760 PRINT:PRINT
770 T=1
780 S=K+2-3*INT((K+1)/3)
790 GOSUB 940
800 S=K
810 GOSUB 940
820 S=K+1-3*INT(K/3)
830 GOSUB 940
840 FOR C=1 TO 21
850 A(C)=B(C)
860 NEXT C
870 NEXT I
880 J=5
890 FOR Z=1 TO 11+INT(10*RND(1)+1):N=0:GOTO 350
900 PRINT:NEXT Z:PRINT
910 PRINT "OOPS!!! YOUR CARD IS THE";
920 N=1
930 J=10:Z=11:GOTO 350
940 FOR R=S TO S+18 STEP 3
950 B(T)=A(R)
960 T=T+1
970 NEXT R:RETURN
980 PRINT ".":PRINT
990 PRINT "DO YOU WANT TO SEE IT AGAIN";:INPUT T$
1000 IF LEFT$(T$,1)="Y" THEN PRINT:PRINT:GOTO 230
1010 END
```



Concentration(신경 쇠약)

트럼프 게임 중 이른바 '신경 쇠약'이라는 게임이 있다. 그 게임을 그대로 컴퓨터 화면에 옮긴 것이 이 게임으로, 기억력과 관찰력을 기르는 데에 아주 좋은 게임이다. 트럼프에서는 여러 명의 플레이어가 게임을 하지만, 이 프로그램에서는 혼자서 게임하도록 되어 있다.

트럼프로 하는 '신경 쇠약'은, 테이블 위에 카드를 섞어 뒤집어 놓고, 한 사람이 임의의 카드 두 장을 펼쳐 두 장이 같은 수이면, 그 두 장의 카드는 그 사람의 것이 된다. 예를 들면, 에이스와 에이스, 또는 킹과 킹 같은 것이다. 같은 수의 카드를 맞춘 사람은 다시 한 번 할 수 있는데, 이 때에도 두 카드의 수가 같으면 또 다시 한 번 할 수 있다. 이와 같이 계속된다. 만약 카드를 맞추지 못했으면, 그대로 카드를 뒤집어 놓는다. 각 플레이어는 서로 다른 사람이 펼쳤던 카드를 볼 수 있으므로, 다른 사람이 펼쳤던 카드를 기억해 두면 게임을 유리하게 이끌어 갈 수 있다. 이렇게 하여 카드가 모두 맞추어질 때까지 게임이 계속된다. 게임이 끝난 싯점에서 가장 많은 카드를 모은 사람이 이긴다.

컴퓨터 게임의 '신경 쇠약'에서는, 52장의 카드가 뒤집혀서 나란히 늘어놓여 있고, 끝에서부터 차례로 번호가 붙어 있다. 당신이 2장의 카드 번호를 지정하면, 두 카드의 수가 화면에 표시되고, 카드의 수가 맞지 않을 경우에는 카드의 수가 지워지고, 다음 문장이 표시된다. 이것은 카드를 펼쳤다가 본래대로 되돌리는 동작과 비슷하다. 이 게임은 한 사람이 하는 것이므로, 얼마나 적은 횟수로 모든 카드를 가지는지로 스코어가 결정된다.

이 게임은, CRT 터미널을 사용하지 않으면 재미가 없다.

이 프로그램을 변경하여, 두 사람이나 세 사람이 게임할 수 있도록 하면 좀 더 재미있을 것이다.

```
RUN
                    CONCENTRATION
          CREATIVE COMPUTING  MORRISTOWN NEW JERSEY


FIRST CARD? 1    첫번째 카드는 ?
SECOND CARD? 2  두 번째 카드는 ?
################################


FIRST CARD? 13
SECOND CARD? 2
################################


FIRST CARD? 53
THERE ARE ONLY 52 CARDS IN THE DECK, NOT  53  카드는 52장뿐이므로,
FIRST CARD? 41                                 53은 안 됩니다.
SECOND CARD? 37
################################


FIRST CARD? 20
SECOND CARD? 16
################################


FIRST CARD? 29
SECOND CARD? 49
################################

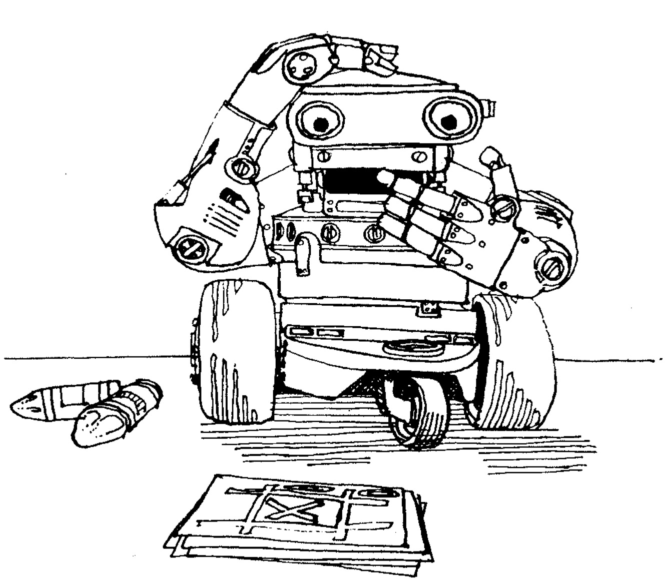

FIRST CARD? 41
SECOND CARD? 29
THAT'S A MATCH --9C         9D           카드가 맞았읍니다.
YOUR SCORE IS NOW 1  YOU HAVE HAD  6 PICKS.
FIRST CARD? 1
SECOND CARD? 49
THAT'S A MATCH --2S         2S
YOUR SCORE IS NOW 2  YOU HAVE HAD  7 PICKS. 7회 하여 득점은 2
FIRST CARD? 41
YOU HAVE ALREADY MATCHED THAT CARD.
FIRST CARD? 43
SECOND CARD? 498
THERE ARE ONLY 52 CARDS IN THE DECK, NOT  498
SECOND CARD? 48
################################


FIRST CARD? 26
SECOND CARD? 51
################################


FIRST CARD?

BREAK IN 370
OK
```

```
10 PRINT TAB( 25);"CONCENTRATION"
15 PRINT
20 PRINT TAB( 15);"CREATIVE COMPUTING  MORRISTOWN NEW JERSEY"
30 PRINT
40 PRINT
50 PRINT
200 DIM C$(52)
210 FOR X=1 TO 52
220 READ E$
230 C$(X)=E$
240 NEXT X
250 REM --   SHUFFLE AND DEAL
260 FOR Z=1 TO 51
270 K$=C$(Z)
275 L=INT((53-Z)*RND(1)+1)
280 C$(Z)=C$(L+Z-1)
290 C$(L)=K$
300 NEXT Z
340 REM --   START TO PLAY
350 FOR N=1 TO 26
360 PRINT:PRINT "FIRST CARD";
370 INPUT U
372 IF U > 0 AND U < 53 THEN 380
374 PRINT "THERE ARE ONLY 52 CARDS IN THE DECK, NOT";U;CHR$(8);"."
376 GOTO 360
380 LET G=1
390 IF C$(U)=" " THEN 840
400 PRINT "SECOND CARD";
410 INPUT W
412 IF W > 0 AND W <53 THEN 420
413 PRINT "THERE ARE ONLY 52 CARDS IN THE DECK, NOT";W;CHR$(8);"."
416 GOTO 400
420 LET G=2
430 IF C$(W)=" " THEN 840
440 IF U <> W THEN 470
450 PRINT "YOU CAN'T PICK THE SAME CARD TWICE!"
460 GOTO 400
470 IF MID$(C$(U),1,1)=MID$(C$(W),1,1) THEN 580
480 PRINT "#";U;"IS ";C$(U),"#";W;"IS ";C$(W),
490 FOR I=1 TO 50
500 PRINT;
510 NEXT I
520 GOSUB 10000:PRINT CHR$(13);"HHHHHHHHHHHHHHHHHHHHHHHHHHHHHH";:GOSUB 20000
530 PRINT CHR$(13);"IIIIIIIIIIIIIIIIIIIIIIIIIIIIII";:GOSUB 20000
540 PRINT CHR$(13);"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
550 PRINT
560 PRINT
570 GOTO 630
580 PRINT "THAT'S A MATCH --";C$(U),C$(W)
590 LET C$(U)=" "
600 LET C$(W)=" "
610 LET S=S+1
620 PRINT "YOUR SCORE IS NOW";S;CHR$(8);".  YOU HAVE HAD";N;"PICKS."
630 NEXT N
640 REM --   THE RESULTS
650 LET S1=S/(N/4)
660 PRINT "YOU SCORED";S;"OUT OF";N;CHR$(8);".  THAT IS ";
670 ON S1+1.5 GOTO 680,700,720,760
680 PRINT "POOR."
690 GOTO 770
700 PRINT "FAIR."
710 GOTO 770
720 PRINT "GOOD."
730 GOTO 770
740 PRINT "EXCELLENT ! ! !"
750 GOTO 770
760 PRINT ". . . AAAH . . . UH....YOU MUST HAVE CHEATED!"
770 PRINT
780 PRINT "DO YOU WANT TO PLAY AGAIN";
790 INPUT Z$
800 IF LEFT$(Z$,1)="Y" THEN 260
810 PRINT
820 PRINT "COME BACK AGAIN!!"
830 END
840 PRINT "YOU HAVE ALREADY MATCHED THAT CARD."
850 IF G=1 THEN 360
860 GOTO 400
870 DATA "AS","2S","3S","4S","5S","6S","7S","8S","9S","10S","JS","QS"
875 DATA "KS"
880 DATA "AH","2H","3H","4H","5H","6H","7H","8H","9H","10H","JH","QH"
885 DATA "KH"
890 DATA "AD","2D","3D","4D","5D","6D","7D","8D","9D","10D","JD","QD"
895 DATA "KD"
900 DATA "AC","2C","3C","4C","5C","6C","7C","8C","9C","10C","JC","QC"
905 DATA "KC"
910 END
10000 FOR XX=1 TO 4000:NEXT
10010 RETURN
20000 FOR YY=1 TO 2000:NEXT
20010 RETURN
```



Condot (땅따먹기 게임)

땅따먹기(Condot —— Connect the dot)는 옛날부터 있었던 게임이다. 자기의 선으로 둘러싼 사각형의 땅을 되도록 많이 차지하는 쪽이 이긴다. 이 게임은, 컴퓨터와 플레이어가 대전하는데, 점과 점을 연결하여 마지막에 사각형을 완성한 쪽이 그 사각형을 자기 땅으로 할 수 있다. 게다가 땅을 차지한 쪽부터 다시 점을 연결할 수 있다. 실제로 해 보면 알겠지만, 이 규칙은 승패에 큰 영향을 준다.

이 게임은, 9개의 사각형이 늘어놓인 바둑판 무늬 위에서 서로 땅을 차지하는 것이다.

아래에 바둑판 무늬의 땅을 보인다. 각 격자점에는 좌표가 붙여져 있다.

```
      (1,2)     (1,4)     (1,6)
(2,1)     (2,3)     (2,5)     (2,7)
      (3,2)     (3,4)     (3,6)
(4,1)     (4,3)     (4,5)     (4,7)
      (5,2)     (5,4)     (5,6)
(6,1)     (6,3)     (6,5)     (6,7)
      (7,2)     (7,4)     (7,6)
```

컴퓨터는 플레이어의 움직임을 가능한 한 흉내내도록 프로그램되어 있으므로, 그 점에 유의해서 플레이하기 바란다. 이 게임은, 최초의 3수 내지 4수까지는 별다른 변동이 없지만, 일단 땅을 차지하기 시작하면 걷잡을 수 없는 상황이 되어 버린다.

프로그램을 약간 변경하면, 보다 재미있는 게임을 즐길 수 있다. 그래서, 그렇게 하고자 하는 사람을 위해 REM문의 개량에 관해 이야기한다.

(1) 쌍방의 플레이어가 움직이고 나서 바둑판 무늬가 표시되도록 프로그램을 개량한다(original에서는 어느 쪽이든 한 번 움직일 때마다 결과가 표시된다).

(2) 게임을 질질 끌면 흥미가 없다. 한 쪽이 과반수의 사각형을 차지하면, 게임이 끝나도록 개량한다.

(3) 각각의 땅(사각형)에 플레이어의 이니셜(initial)을 표시하도록 개량한다.

The program is by Chuck Lund; the writeup by Pete Olivieri. It originally appeared in *Creative Computing*, Jan/Feb 1976.

```
RUN
                    CONDOT
              CREATIVE COMPUTING
            MORRISTOWN, NEW JERSEY


THIS PROGRAM WILL PLAY CONNECT THE DOTS WITH YOU.
THE GAME IS PLAYED ON A 4 X 4 ARRAY. WHEN
YOU WANT TO MAKE A MOVE YOU MUST TYPE IN
THE COORDINATES OF THE SPACE BETWEEN THE TWO DOTS YOU
WANT TO CONNECT. ENTER EACH OF YOUR MOVES BY TYPING
THE ROW NUMBER, A COMMA AND THE COLUMN NUMBER.
THE UPPER LEFT HAND CORNER OF THE ARRAY IS 1,1.
HERE WE GO.
 .   .   .   .

 .   .   .   .

 .   .   .   .

 .   .   .   .
YOUR MOVE? 1,1     어디를 잇겠읍니까?
YOU REALLY DON'T WANT TO PUT A LINE THERE!!!!
YOUR MOVE? 1,2                  그 곳에는 선을 이을 수
 . - .   .   .                  없읍니다!

 .   .   .   .

 .   .   .   .

 .   .   .   .
MY MOVE  내 차례
 . - .   .   .

 .   .   .   .

 .   .   .   .

 .   .   . - .
YOUR MOVE? 7,5
YOU REALLY DON'T WANT TO PUT A LINE THERE!!!!
YOUR MOVE? 7,4
 . - .   .   .

 .   .   .   .

 .   .   .   .

 .   . - . - .
MY MOVE
 . - . - .   .

 .   .   .   .

 .   .   .   .

 .   . - . - .
YOUR MOVE? 1,6
 . - . - . - .

 .   .   .   .

 .   .   .   .

 .   . - . - .
MY MOVE
 . - . - . - .

 .   .   .   .

 .   .   .   .

 . - . - . - .
YOUR MOVE? 2,1
 . - . - . - .
 :
 .   .   .   .

 .   .   .   .

 . - . - . - .
MY MOVE
 . - . - . - .
 :
 .   .   .   .

 .   .   .   .
             :
 . - . - . - .
YOUR MOVE? 4,1
 . - . - . - .
 :
 .   .   .   .
 :
 .   .   .   .
             :
 . - . - . - .
MY MOVE
 . - . - . - .
 :
 .   .   .   .
 :           :
 .   .   .   .
             :
 . - . - . - .
YOUR MOVE? 2,7
 . - . - . - .
 :           :
 .   .   .   .
 :           :
 .   .   .   .
             :
 . - . - . - .
MY MOVE
 . - . - . - .
 :           :
 .   .   .   .
 :           :
 .   .   .   .
 :           :
 . - . - . - .
```

```
YOUR MOVE? 4,3
. - . - . - .
:           :
.   .   .   .
:   :       :
.   .   .   .
:           :
. - . - . - .

YOUR MOVE? 5,4
. - . - . - .
:           :
.   .   .   .
:   :   :   :
.   . - .   .
:           :
. - . - . - .

MY MOVE
. - . - . - .
:       :   :
.   . - .   .
:   : C :   :
.   . - .   .
:           :
. - . - . - .

MY MOVE
. - . - . - .
:           :
.   .   .   .
:   :   :   :
.   .   .   .
:           :
. - . - . - .

MY MOVE
. - . - . - .
:           :
.   . - .   .
:   : C :   :
.   . - .   .
:           :
. - . - . - .

YOUR MOVE? 2,3
. - . - . - .
:   : H :   :
.   . - .   .
:   : C :   :
.   . - .   .
:           :
. - . - . - .

YOUR MOVE? 3,6
. - . - . - .
:   : H : H :
.   . - . - .
:   : C :   :
.   . - .   .
:           :
. - . - . - .

MY MOVE
. - . - . - .
: C : H : H :
. - . - . - .
:   : C :   :
.   . - .   .
:   :       :
. - . - . - .

MY MOVE
. - . - . - .
: C : H : H :
. - . - . - .
: C : C : C :
. - . - . - .
: C :       :
. - . - . - .

YOUR MOVE? 6,3
. - . - . - .
:   : H : H :
.   . - . - .
:   : C :   :
.   . - .   .
:   :       :
. - . - . - .

MY MOVE
. - . - . - .
: C : H : H :
. - . - . - .
: C : C :   :
. - . - .   .
: C :       :
. - . - . - .

MY MOVE
. - . - . - .
: C : H : H :
. - . - . - .
: C : C : C :
. - . - . - .
: C : C : C :
. - . - . - .
I WON
```

```
1 PRINT CHR$(26);TAB( 26);"CONDOT":PRINT
2 PRINT TAB( 20);"CREATIVE COMPUTING"
3 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY":PRINT
4 PRINT
5 PRINT
6 PRINT "THIS PROGRAM WILL PLAY CONNECT THE DOTS WITH YOU."
7 PRINT "THE GAME IS PLAYED ON A 4 X 4 ARRAY. WHEN"
8 PRINT "YOU WANT TO MAKE A MOVE YOU MUST TYPE IN"
9 PRINT "THE COORDINATES OF THE SPACE BETWEEN THE TWO DOTS YOU"
10 PRINT "WANT TO CONNECT. ENTER EACH OF YOUR MOVES BY TYPING"
11 PRINT "THE ROW NUMBER, A COMMA AND THE COLUMN NUMBER."
12 PRINT "THE UPPER LEFT HAND CORNER OF THE ARRAY IS 1,1."
13 PRINT "HERE WE GO."
14 PRINT
20 DIM A(12,12)
30 V=0
40 FOR R=1 TO 12
50 FOR C=1 TO 12
60 IF R/2=INT(R/2) THEN 100
70 IF C/2 = INT(C/2) THEN 100
80 A(R,C)=-50
90 GOTO 110
100 A(R,C)=0
110 NEXT C
120 NEXT R
130 IF V=1 THEN 200
200 GOSUB 1000
210 PRINT:PRINT "YOUR MOVE";
220 INPUT X,Y
225 PRINT CHR$(26)
230 IF X=INT(X) THEN 260
240 PRINT "YOU REALLY DON'T WANT TO PUT A LINE THERE!!!!"
250 GOTO 210
260 IF (X-1)*(X-7) > 0 THEN 240
265 X=X+2
270 IF (Y-1)*(Y-7) > 0 THEN 240
272 Y=Y+2
280 IF (X+Y+1)/2 <> INT((X+Y+1)/2) THEN 240
290 IF A(X,Y) <> 0 THEN 240
300 A(X,Y)=50
310 IF X/2 =INT(X/2) THEN 380
320 IF A(X-2,Y)+A(X-1,Y+1)+A(X-1,Y-1) <> 150 THEN 350
330 P=1
340 A(X-1,Y)=1
350 IF A(X+2,Y)+A(X+1,Y+1)+A(X+1,Y-1) <> 150 THEN 440
360 A(X+1,Y)=1
370 GOTO 200
380 IF A(X,Y-2)+A(X+1,Y-1)+A(X-1,Y-1) <> 150 THEN 410
390 A(X,Y-1)=1
400 P=1
410 IF A(X,Y+2)+A(X+1,Y+1)+A(X-1,Y+1) <> 150 THEN 440
420 A(X,Y+1)=1
430 GOTO 200
440 IF P=1 THEN 200
450 GOSUB 1000
460 PRINT:PRINT "MY MOVE"
470 FOR R=4 TO 10 STEP 2
480 FOR C=4 TO 10 STEP 2
490 IF A(R-1,C)+A(R+1,C)+A(R,C-1)+A(R,C+1) <> 150 THEN 680
500 A(R,C)=-1
510 IF A(R-1,C) <> 0 THEN 550
520 A(R-1,C)=50
530 IF A(R-3,C)+A(R-2,C-1)+A(R-2,C+1) <> 150 THEN 450
540 LET A(R-2,C)=-1
550 IF A(R+1,C) <> 0 THEN 590
560 A(R+1,C)=50
570 IF A(R+3,C)+A(R+2,C-1)+A(R+2,C+1) <> 150 THEN 450
580 A(R+2,C)=-1
590 IF A(R,C-1) <> 0 THEN 630
600 A(R,C-1)=50
610 IF A(R,C-3)+A(R-1,C-2)+A(R+1,C+2) <> 150  THEN 450
620 A(R,C-2)=-1
630 IF A(R,C+1) <> 0 THEN 450
640 A(R,C+1)=50
650 IF A(R,C+3)+A(R-1,C+2)+A(R+1,C+2) <> 150 THEN 450
660 A(R,C+2)=-1
670 GOTO 450
680 NEXT C
690 NEXT R
692 IF E > 1 THEN 730
700 IF A(12-X,12-Y)<>0 THEN 730
710 A(12-X,12-Y)=50
712 IF E > 1 THEN 870
720 GOTO 200
730 FOR R=3 TO 9
740 FOR C=3 TO 9
750 IF (R+C)/2=INT((R+C)/2) THEN 850
760 IF A(R,C) <> 0 THEN 850
780 IF R/2 = INT(R/2) THEN 830
790 IF A(R-2,C)+A(R-1,C-1)+A(R-1,C+1) = 100 THEN 850
800 IF A(R+2,C)+A(R+1,C-1)+A(R+1,C+1) =100 THEN 850
810 A(R,C)=50
820 GOTO 200
830 IF A(R,C-2)+A(R-1,C-1)+A(R+1,C-1)=100 THEN 850
840 IF A(R,C+2)+A(R-1,C+2)+A(R+1,C+1) <> 100 THEN 810
850 NEXT C
860 NEXT R
862 IF E > 1 THEN 700
870 R=INT(RND(1)*7)+3
880 C=INT(RND(1)*7)+3
881 IF R/2=INT(R/2) THEN 885
882 IF C/2=INT(C/2) THEN 900
883 GOTO 870
885 IF C/2 <> INT(C/2) THEN 900
886 GOTO 870
900 IF A(R,C)<> 0 THEN 870
910 A(R,C)=50
920 GOTO 200
930 PRINT "DO YOU WANT TO PLAY AGAIN";
940 INPUT B$
950 IF LEFT$(B$,1)="Y" THEN 40
960 END
1000 P=0
1010 D=0
1020 E=0
1030 FOR R=3 TO 9
1040 FOR C=3 TO 9
1050 IF A(R,C) <> 0 THEN 1080
1060 PRINT "   ";
1070 GOTO 1240
1080 IF A(R,C) <> -50 THEN 1110
1090 PRINT " . ";
1100 GOTO 1240
1110 IF A(R,C) <> -1 THEN 1140
1120 PRINT " C ";
1130 GOTO 1170
1140 IF A(R,C) <> 1 THEN 1200
1150 PRINT " H ";
1170 D=D+A(R,C)
1180 E=E+1
1190 GOTO 1240
1200 IF R/2 = INT(R/2) THEN 1230
1210 PRINT " _ ";
1220 GOTO 1240
1230 PRINT " \ ";
1240 NEXT C
1245 PRINT
1250 NEXT R
1260 IF E >=9 THEN 1280
1270 RETURN
1280 IF D > 0 THEN 1310
1290 PRINT "I WON"
1300 GOTO 930
1310 PRINT "YOU WON!!!"
1320 GOTO 930
1400 END
```

Convoy (잠수함 게임)

10×10의 매트릭스(matrix) 상에서 하는 해전 게임이다. 컴퓨터는 구축함 두 척을 가지고 화물선을 호위하고, 플레이어는 잠수함을 몰아 화물선을 격침한다.

구축함 두 척 중 한 척은 화물선에 딱 붙어서 호위하고, 또 한 척은 잠수함을 찾아 파괴시킨다. 잠수함을 찾아다니는 구축함은 한 번에 0～3개의 스퀘어(square)를 이동할 수 있다(즉, 이동하지 않을 수도 있다). 화물선을 호위하는 구축함은 화물선과 같은 스퀘어 안에 있다.

잠수함은 #12의 스퀘어에서 출발하여, 상하 좌우로 자유롭게 이동할 수 있는데, 한 번에 2스퀘어씩밖에 이동할 수 없다. 잠수함은 4발의 어뢰를 보유하고 있으며, 그 어뢰를 상하 좌우뿐만 아니라 비스듬히 발사할 수도 있다.

잠수함이 화물선을 격침하거나, 구축함이 잠수함을 격침하거나 하면, 게임이 끝난다.

```
                              CONVOY
              CREATIVE COMPUTING, MORRISTOWN, NEW JERSEY
INSTRUCTIONS? YES
THIS NAVAL WAR GAME IS PLAYED ON A 10 BY 10 MATRIX
YOU ARE THE SUB; THE COMPUTER IS A CARGO SHIP AND ITS TWO
DESTROYERS. THE SHIP STARTS IN SQUARE 100 AND RANDOMLY MOVES
TO SQUARE 1, MOVING 0,1,2,OR 3 SQUARES AT A TIME.
ONE OF THE SHIP'S DESTROYERS STARTS AT SQUARE 78 AND MOVES
RANDOMLY 0,1,2 OR 3 SQUARES AT A TIME SEARCHING FOR THE SUB.
THE OTHER DESTROYER STAYS WITHIN ONE SQUARE OF THE SHIP AS
AN ESCORT.  THE SUB STARTS IN SQUARE 12, CAN MOVE UP,DOWN,
LEFT OR RIGHT 1 SQUARE AT A TIME, 2 MOVES PER TURN,AND IT
HAS TORPEDOES WHICH IT CAN FIRE 1 AT A TIME IN ANY STRAIGHT
LINE. AFTER EACH SUB MOVE, THE PERISCOPE WILL SEARCH
EACH ADJACENT SQUARE FOR THE SHIP. ALSO RANDOM RECONNAISANCE
REPORTS WILL BE MADE. THE SEQUENCE OF PLAY IS:

1 SHIP AND DESTROYERS MOVE 화물선과 구축함이 이동한다.
2 YOUR MOVE                잠수함이 이동한다.
3 YOU CAN FIRE A TORPEDO   어뢰 발사.
4 PERISCOPE SEARCH         잠망경으로 찾는다.
5 YOUR MOVE AGAIN  } 다시 잠수함을 이동하여 1로 돌아온다.
 AND BACK TO 1

 THE SUB WINS IF IT SUCCEEDS IN HITTING THE SHIP WITHIN 4
TORPEDOES WITHOUT MOVING TO A SQUARE OCCUPIED BY A DESTROYER.

TO 'FIRE?' ANSWER:NO,L,R,U,D,LU,LD,RU,OR,RD.
'L'=LEFT,'R'=RIGHT,'U'=UP,'D'=DOWN,'LU'=LEFT UP,'RU'=RIGHT
UP,OR 'RD'=RIGHTDOWN

WILL YOU NEED A BOARD? YES  보드를 보겠읍니까?
                                          SUB ...... 잠수함
  1   2   3   4   5   6   7   8   9  10   DESTROYER ...... 구축함
 11  12  13  14  15  16  17  18  19  20   SHIP ...... 화물선
 21  22  23  24  25  26  27  28  29  30
 31  32  33  34  35  36  37  38  39  40
 41  42  43  44  45  46  47  48  49  50
 51  52  53  54  55  56  57  58  59  60
 61  62  63  64  65  66  67  68  69  70
 71  72  73  74  75  76  77  78  79  80
 81  82  83  84  85  86  87  88  89  90
 91  92  93  94  95  96  97  98  99 100


DESTROYER HAS MOVED
SHIP MOVED

SUB IS NOW AT  12  잠수함은 현재 12에 있읍니다.
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 13  어디로 이동합니까?
SUB'S MOVE? 14

SUB AT 14
SHIP LAST SEEN AT 100  화물선을 최후로
FIRE? NO               본 곳은 100입니다.
        ↘ 어뢰를 발사하겠읍니까?
UP PERISCOPE
SHIP NOT IN SIGHT  화물선은 보이지
                   않습니다.
RECON. SHOWS SHIP AT  99
        ↳ 화물선이 99에 있읍니다.
SUB IS NOW AT  14
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 15
SUB'S MOVE? 16
DESTROYER HAS MOVED
SHIP MOVED

SUB IS NOW AT  16
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 17
SUB'S MOVE? 18

SUB AT 18
SHIP LAST SEEN AT 99
FIRE? NO

UP PERISCOPE
SHIP NOT IN SIGHT

RECON. SHOWS SHIP AT  88

SUB IS NOW AT  18
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 28
SUB'S MOVE? 38
DESTROYER HAS MOVED
SHIP MOVED

SUB IS NOW AT  38
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 48
SUB'S MOVE? 58

SUB AT 58
SHIP LAST SEEN AT 88
FIRE? NO

UP PERISCOPE
SHIP NOT IN SIGHT

RECON. SHOWS SHIP AT  87

SUB IS NOW AT  58
DESTROYER LAST SIGHTED AT  78
SUB'S MOVE? 57
DESTROYER CLOSING IN AT 66
SUB'S MOVE? 56
DESTROYER CLOSING IN AT 66
DESTROYER HAS MOVED
SHIP MOVED
```

```
80 PRINT TAB( 33)"CONVOY":PRINT
90 PRINT TAB( 15)"CREATIVE COMPUTING, MORRISTOWN, NEW JERSEY"
95 PRINT:PRINT
100 PRINT "INSTRUCTIONS";
110 INPUT B$
120 IF LEFT$(B$,1)="N" THEN 300
125 PRINT CHR$(26)
130 PRINT "   THIS NAVAL WAR GAME IS PLAYED ON A 10 BY 10 MATRIX."
140 PRINT"YOU ARE THE SUB; THE COMPUTER IS A CARGO SHIP AND ITS TWO"
145 PRINT"DESTROYERS. THE SHIP STARTS IN SQUARE 100 AND RANDOMLY MOVES"
150 PRINT"TO SQUARE 1, MOVING 0,1,2,OR 3 SQUARES AT A TIME."
155 PRINT"   ONE OF THE SHIP'S DESTROYERS STARTS AT SQUARE 78 AND MOVES"
160 PRINT"RANDOMLY 0,1,2 OR 3 SQUARES AT A TIME SEARCHING FOR THE SUB."
165 PRINT"THE OTHER DESTROYER STAYS WITHIN ONE SQUARE OF THE SHIP AS"
166 PRINT"AN ESCORT.  THE SUB STARTS IN SQUARE 12, CAN MOVE UP,DOWN, "
167 PRINT"LEFT OR RIGHT 1 SQUARE AT A TIME, 2 MOVES PER TURN, AND IT "
190 PRINT"HAS TORPEDOES WHICH IT CAN FIRE 1 AT A TIME IN ANY STRAIGHT"
200 PRINT"LINE. AFTER EACH SUB MOVE, THE PERISCOPE WILL SEARCH"
210 PRINT"EACH ADJACENT SQUARE FOR THE SHIP. ALSO RANDOM RECONNAISANCE"
220 PRINT"REPORTS WILL BE MADE."
221 PRINT
225 PRINT"   THE SEQUENCE OF PLAY IS:"
230 PRINT
240 PRINT"1 - SHIP AND DESTROYERS MOVE"
245 PRINT"2 - YOUR MOVE"
250 PRINT"3 - YOU CAN FIRE A TORPEDO"
270 PRINT"4 - PERISCOPE SEARCH"
275 PRINT"5 - YOUR MOVE AGAIN"
280 PRINT"6 - BACK TO NUMBER 1"
281 PRINT
282 LINE INPUT "ENTER 'RETURN' TO CONTINUE.  ";XX$:PRINT CHR$(26)
283 PRINT"   THE SUB WINS IF IT SUCCEEDS IN HITTING THE SHIP WITHIN 4 "
285 PRINT"TORPEDOES WITHOUT MOVING TO A SQUARE OCCUPIED BY A DESTROYER."
286 PRINT
287 PRINT"TO 'FIRE?' ANSWER: 'NO','L','R','U','D','LU','LD','RU', OR 'RD'.":PRINT
288 PRINT"'L' = LEFT, 'R' = RIGHT, 'U' = UP, 'D' = DOWN, 'LU' = LEFT UP,"
289 PRINT"'RU' = RIGHT UP, 'RD' = RIGHT DOWN."
300 PRINT:PRINT"WILL YOU NEED A BOARD";
310 INPUT B$
320 IF LEFT$(B$,1)="N" THEN 420
330 PRINT
340 PRINT
350 PRINT"  1   2   3   4   5   6   7   8   9  10"
360 FOR I=1 TO 9
370 FOR J=1 TO 10
380 PRINT USING "### ";I*10+J;
390 NEXT J
400 PRINT
410 NEXT I
420 PRINT:PRINT
440 D=12
```

```
450 T=4
460 S=100
470 C=78
480 C2=78
490 L=100
500 IF C=-100 THEN 550
510 GOTO 2780
520 Y3=0
530 M1=0
540 GOTO 580
550 M1=0
560 IF S=2 THEN 1230
570 Y3=1
580 IF S=3 THEN 1230
590 IF S=11 THEN 1230
600 IF S=12 THEN 1230
610 IF S=21 THEN 1230
620 X=RND(1)
630 IF X>.4 THEN 690
640 IF X>.2 THEN 710
650 IF X>.05 THEN 670
660 GOTO 1020
670 S1=0
680 GOTO 720
690 S1=2
700 GOTO 720
710 S1=1
720 X=RND(1)
730 IF X<.75 THEN 760
740 P1=1
750 GOTO 830
760 P1=-1
770 GOTO 830
780 IF S=10*INT(S/10) THEN 820
790 GOTO 860
800 IF S=1+(10*INT(S/10)) THEN 820
810 GOTO 860
820 P1=P1*(-1)
830 M2=P1*((INT(2*(RND(1)))*9)+1)
840 IF M2=1 THEN 780
850 IF M2=-1 THEN 800
860 IF M1=M2*(-1) THEN 820
870 C1=S+M2
880 IF C1=1 THEN 1230
890 IF C1=D THEN 2720
900 IF C1=C THEN 820
910 IF C1<1 THEN 820
920 IF C1>100 THEN 820
930 M1=M2
940 S=C1
950 C6=S+((INT(2*RND(1))*(-2))+1)*((INT(2*RND(1))*9)+1)
960 IF C6<2 THEN 950
970 IF C6>100 THEN 950
980 IF C6= D THEN 2700
990 IF S1=1 THEN 670
1000 IF S1=2 THEN 710
1010 C3=0
1020 PRINT"SHIP MOVED."
1030 IF Y3=0 THEN 1060
1040 X1=0
1050 GOTO 2340
1060 PRINT
1070 X1=1
1080 PRINT"SUB AT";D;CHR$(8);"."
1090 PRINT"SHIP LAST SEEN AT";L;CHR$(8);"."
1100 PRINT:PRINT"FIRE";
1110 INPUT A$
1120 IF LEFT$(A$,1)="N" THEN 1730
1130 IF A$="L" THEN 1250
1140 IF A$="R" THEN 1270
1150 IF A$="U" THEN 1290
1160 IF A$="D" THEN 1310
1180 IF A$="LU" THEN 1330
1185 IF A$="LD" THEN 1350
1190 IF A$="RU" THEN 1370
1200 IF A$="RD" THEN 1390
1210 PRINT"ANSWER 'NO', 'L', 'R', 'U', 'D', 'LU', 'LD',
     'RU' OR 'RD'."
1220 GOTO 1100
1230 PRINT"SHIP'S IN PORT."
1240 GOTO 2750
1250 P1=-1
1260 GOTO 1400
1270 P1=1
1280 GOTO 1400
1290 P1=-10
1300 GOTO 1400
1310 P1=10
1320 GOTO 1400
1330 P1=-11
1340 GOTO 1400
1350 P1=9
1360 GOTO 1400
1370 P1=-9
1380 GOTO 1400
1390 P1=11
1400 D1=D
1410 D1=D1+P1
1420 PRINT D1;
1430 IF D1=S THEN 1500
1440 IF D1=C THEN 1520
1450 IF D1<11 THEN 1600
1460 IF D1>90 THEN 1640
1470 IF D1=10*INT(D1/10) THEN 1560
1480 IF D1=1+(10*INT(D1/10)) THEN 1580
1490 GOTO 1410
1500 PRINT"KER-BOOM!! CARGO SHIP DESTROYED!"
1502 PRINT:PRINT"YOU WIN!!"
1504 Q=1
1510 GOTO 2750
1520 PRINT"WHAMO!! DESTROYER SUNK."
1530 C=-100
1540 T=T-1
1550 GOTO 1710
1560 IF D=10*INT(D/10) THEN 1410
1570 GOTO 1680
1580 IF D=1+(10*INT(D/10)) THEN 1410
1590 GOTO 1680
1600 IF D>10 THEN 1680
1610 IF D1<2 THEN 1680
1620 IF D1>9 THEN 1680
1630 GOTO 1410
1640 IF D<91 THEN 1680
1650 IF D1<92 THEN 1680
1660 IF D1>99 THEN 1680
1670 GOTO 1410
1680 T=T-1
1690 PRINT"MISS."
1700 IF T=0 THEN 2740
1710 PRINT T;"TORPEDOES LEFT."
1720 GOTO 1100
1730 PRINT
1740 Y=0
1750 PRINT"UP PERISCOPE."
1760 Y2=0
1770 IF S=D THEN 1930
1780 IF S=D-1 THEN 1930
1790 IF S=D+1 THEN 1930
1800 IF S=D-10 THEN 1930
1810 IF S=D+10 THEN 1930
1820 IF S=D-9 THEN 1930
1830 IF S=D+9 THEN 1930
1840 IF S=D-11 THEN 1930
1850 IF S=D+11 THEN 1930
1860 IF Y=1 THEN 1960
1870 PRINT"SHIP NOT IN SIGHT."
1880 X=RND(1)
1890 IF X<.35 THEN 1960
1900 PRINT
1910 PRINT"RECON. SHOWS ";
1920 Y2=-1
1930 PRINT"SHIP AT";S;CHR$(8);"."
1940 Y2=Y2+1
1950 L=S
1960 IF C=D THEN 2280
1970 IF C6=D THEN 2700
1980 IF C=D+1 THEN 2260
1990 IF C6=D+1 THEN 2240
2000 IF C=D-1 THEN 2260
2010 IF C6=D-1 THEN 2240
2020 IF C=D+9 THEN 2260
2030 IF C6=D+9 THEN,2240
2040 IF C=D-9 THEN 2260
2050 IF C6=D-9 THEN 2240
2060 IF C=D+10 THEN 2260
2070 IF C6=D+10 THEN 2240
2080 IF C=D-10 THEN 2260
2090 IF C6=D-10 THEN 2240
2100 IF C=D+11 THEN 2260
2110 IF C6=D+11 THEN 2240
2120 IF C=D-11 THEN 2260
2130 IF C6=D-11 THEN 2240
2140 IF C=D+2 THEN 2260
2150 IF C=D-2 THEN 2260
2160 IF C=D+20 THEN 2260
2170 IF C=D-20 THEN 2260
2180 IF C=-100 THEN 2320
2190 IF Y=1 THEN 2330
2200 X=RND(1)
2210 IF X<.6 THEN 2320
2220 PRINT"RECON. PLANE SPOTS TIN CAN AT";C;CHR$(8);"."
2230 GOTO 2300
2240 PRINT"ESCORT VERY NEAR!"
2250 GOTO 2320
2260 PRINT"DESTROYER CLOSING IN AT";C;CHR$(8);"."
2270 GOTO 2300
2280 PRINT"DESTROYER DIRECTLY OVER HEAD."
2290 GOTO 2660
2300 C2=C
2310 C3=1
2320 IF Y=0 THEN 2340
2330 RETURN
2340 PRINT
2350 PRINT"SUB IS NOW AT";D;CHR$(8);"."
2360 IF C3=1 THEN 2390
2370 IF C=-100 THEN 2390
2380 PRINT"DESTROYER LAST SIGHTED AT";C2;CHR$(8);"."
2390 D2=0
2400 PRINT"SUB'S MOVE";
2410 Y=1
2420 INPUT X
2430 IF X=D THEN 2560
2440 IF X<2 THEN 2640
2450 IF X>100 THEN 2640
2460 IF X=INT(X) THEN 2480
2470 GOTO 2640
2480 IF X=D+1 THEN 2530
2490 IF X=D-1 THEN 2550
2500 IF X=D+10 THEN 2560
2510 IF X=D-10 THEN 2560
2520 GOTO 2640
2530 IF D=10*INT(D/10) THEN 2640
2540 GOTO 2560
2550 IF X=10*INT(X/10)  THEN  2640
2560 D=X
2570 GOSUB 1760
2580 IF D2=1 THEN 2610
2590 D2=1
2600 GOTO 2400
2610 IF X1=0 THEN 3060
2620 IF C=-100 THEN 550
2630 GOTO 2780
2640 PRINT"CAN'T DO."
2650 GOTO 2400
2660 X=RND(1)
2670 IF X<.8 THEN 2700
2680 PRINT"DEPTH CHARGE JUST MISSED!"
2690 GOTO 2300
2700 PRINT"VAROOM!! SUB DEPTH CHARGED!"
2710 GOTO 2750
2720 PRINT"SHIP NOW OVERHEAD."
2730 GOTO 550
2740 PRINT"AMMO DEPLETED."
2750 PRINT
2751 IF Q=0 THEN 2754
2752 Q1=Q1+1
2753 GOTO 2755
2754 Q2=Q2+1
2755 PRINT"SCORE: COMPUTER";Q2;" -  SUB";Q1;CHR$(8);"."
2756 PRINT
2757 Q=0
2760 PRINT "NEW GAME";
2761 INPUT N$
2762 IF LEFT$(N$,1)="N" THEN 3080
2770 GOTO 420
2780 M1=0
2790 S1=0
2800 X=RND(1)
2810 IF X<.6 THEN 2840
2820 P1=1
2830 GOTO 2850
2840 P1=-1
2850 M2=(P1*((INT(2*RND(1)))*9)+1)
2860 IF M2=1 THEN 3000
2870 IF M2=-1 THEN 3020
2880 IF M1=M2*(-1) THEN 3040
2890 C1=C+M2
2900 IF C1=D THEN 2700
2910 IF C1=S THEN 3040
2920 IF C1<2 THEN 3040
2930 IF C1>100 THEN 3040
2940 M1=M2
2950 C=C1
2960 IF S1=1 THEN 550
2970 S1=1
2980 PRINT"DESTROYER HAS MOVED."
2990 GOTO 2800
3000 IF C=10*INT(C/10) THEN 3040
3010 GOTO 2880
3020 IF C=1+(10*INT(C/10)) THEN 3040
3030 GOTO 2880
3040 P1=P1*(-1)
3050 GOTO 2850
3060 IF Y2=0 THEN 1060
3070 GOTO 520
3080 END
```

Corral (카우보이 게임)

이 게임은, "아라곤"에 나오는 하리를 보고 영감을 얻어 만든 것이다. 하리란, 어느 10대 소녀의 변덕으로 인해 내쫓기는 처지가 된 말의 이름이다. 이 이야기에서는 하리를 통해 말의 생태가 생생하게 묘사되어 있다.

이 게임에서는, 그러한 말의 습성을 도입하고 있다. 이 게임은 1 차원으로 시뮬레이트(simulate)했으므로, 다소 만족스럽지 못할지도 모르겠다. 프린터를 사용할 수 있도록 프로그램을 작성했기 때문에, 2차원적으로 시뮬레이트할 수 없었다. 이 프로그램을, 화면을 사용하도록 개량하면 상당히 효과적이다.

이 게임에서는, 21자(字)분의 공백 양쪽에 사이드 레일(side rail)을 쌓아 울타리로 한다. 카우보이(C로 표시)는 맨 처음 가장 왼쪽에 있고, 말(H로 표시)은 사이드 레일 안의 10~18자까지의 공간(오른쪽에 치우친 부근)을 어슬렁어슬렁 거닐고 있다. 이 말의 동작이나 말의 기질(광포해졌다 양순해졌다 하는)의 변화는 60행과 70행의 데이터에 의해서 컨트롤 된다.

말이 뛰기 시작하면, 450행에 의해 카우보이로부터 하나 이상의 공백이 떨어진 곳에서 멈추게 되어 있다. 실제로는, 말이라는 동물은 카우보이가 붙잡기 어려운 곳으로 도망치지만, 이 게임에서는 오히려, 뜻하지 않은 카우보이의 접근으로 말이 뛰기 시작한다고 하는 것이 좋을 것이다. 즉, 말과의 거리를 한 번에 반 이상으로 좁히려고 하면 말이 뛰기 시작하는 것이다.

말에 접근한 경우, 카우보이가 말에 채일 위험이 있는데, 이것은 500행의 IF~THEN 문으로 결정된다. 말에 채이면, 1회~5회 동안 카우보이는 움직일 수 없게 된다(이 움직일 수 없게 되는 시간도 마찬가지로 설정된다). 그 사이에 말은 그 장소에서 뛰어나간다. 말에게 여러 번 채이면(이 횟수도 난수로 결정된다), 카우보이는 구급차에 실려 병원으로.

때로 말이 카우보이 곁으로 다가와 꼭 붙잡힐 것 같은 때가 있다. 그러나 방심해서는 안 된다. 난수란 언제 어떻게 발생될지 모르는 것. 돌연 치명적인 킥(Kick)이 날아올 수도 있다. 이 게임에 익숙한 카우보이는 부상당하지 않고 3번의 움직임만으로도 말을 잡을 수 있다. 이 프로그램에서는 100번까지 카우보이에게 움직일 기회를 준다. 그러나 100번을 움직여서도 말을 잡지 못하면, 부엌에서 잡일이나 하라는 문장이 출력되고, 게임이 끝난다.

컬러 그래픽스를 사용하여, 말과 카우보이를 H나 C와 같은 무미 건조한 문자로 나타내지 말고, 말이나 카우보이 그림이 움직이고, 말의 울음 소리 등이 나도록 하면 더할 나위 없겠지만, 그러면 프로그램 작성이 너무 어려워진다.

Program and description are by Colin Keay.

```
                         CORRAL
                   CREATIVE COMPUTING
                 MORRISTOWN, NEW JERSEY


 YOU ARE THE COWBOY.  GO CATCH YOUR HORSE IN THE CORRAL!
DO YOU WANT FULL INSTRUCTIONS? YES
YOU MOVE TOWARD YOUR HORSE 1 TO 5 STEPS AT A TIME.
IF YOU MORE THAN HALVE THE SEPERATION HE WILL BOLT!
HE MAY ALSO BOLT WHEN HE IS CLOSE TO THE RAIL
WHEN YOU COME WITHIN 2 STEPS HE MAY KICK.  SO LOOKOUT!!

AFTER '?' TYPE IN DIGIT FROM 1 TO 5 FOR COWBOY'S NEXT MOVE
'?' 다음에 1부터 5까지의 숫자 중 하나를 입력하십시오. 그것이 카우보이가 다음에 움직일
0             IC               H    I                  ? 5  스페이스입니다.
1             I     C             H I                  ? 5
2             I          C        H I                  ? 2
3             I            C       HI                  ? 2
4             I              C     HI                  ? 1
5             I           H   C     I      BOLTED      ? 1
6             I         H    C      I                  ? 1
7             I        H    C       I                  ? 1
8             I      H     C        I                  ? 2
9             I      H   C          I                  ? 1
10            I     H   C           I                  ? 1
11            I    H   C            I                  ? 1
12            I  H    C             I                  ? 1
13            I H    C              I                  ? 1
14            IH    C               I                  ? 1
15            I    C    H           I      BOLTED      ? 1
16            I     C      H        I                  ? 2
17            I       C     H       I                  ? 2
18            I         C     H     I                  ? 2
19            I           C   H     I                  ? 1
20            I            C  H     I                  ? 1
21            I             C   H   I                  ? 1
22            I              C    H I                  ? 1
23            I           H   C     I      BOLTED      ? 2
24            I          H  C       I                  ? 1
25            I         H  C        I                  ? 1
26            I          HC         I                  ? 1
27            I        H C          I                  ? 1
28            I     H   C           I                  ? 2
29            I   H   C             I                  ? 1
30            I H    C              I                  ? 2
31            I    C      H         I      BOLTED      ? 3
32            I       C   H         I                  ? 1
33            I         C    H      I                  ? 2
34            I           C H       I                  ? 1
              I            ■        I

YIPPEE!!  NOW SEE IF YOU CAN CATCH HIM IN FEWER MOVES 만세! 보다 적은
ANOTHER ROUNDUP? NO THANKS  움직임으로 말을 잡을 수 있나 다시 한 번 하겠읍니까?
```

```
ANOTHER ROUNDUP? YES

  0           IC               H    I               ? 5
  1           I     C            H  I               ? 5
  2           I          C         HI               ? 5
  3           I               C    HI               ? 2
  4           I       H         C   I   BOLTED      ? 3
  5           I      H       C      I               ? 2
  6           I     H      C        I               ? 3
  7           I   H     C           I               ? 3
  8           I H    C              I               ? 2
  9           I H  C                I               ? 1
 10           I H C                 I               ? 1
 11           I  C      H           I   BOLTED      ? 3
 12           I     C   H           I               ? 2
 13           I       C  H          I               ? 1
 14           I        C   H        I               ? 2
 15           I          C   H      I               ? 2
 16           I            C    H   I               ? 1
 17           I             C     H I               ? 2
 18           I               C    HI               ? 1
 19           I           H    C    I   BOLTED      ? 1
 20           I           H   C     I               ? 2
 21           I             C  H    I   KICKED
 22           I             C      HI
 23           I             C      HI
 24           I             C      HI
 25           I             C      HI               ? 3
 26           I                C   HI               ? 1
 27           I           H     C   I   BOLTED      ? 3
 28           I         H    C      I               ? 2
 29           I       H    C        I               ? 2
 30           I       H  C          I               ? 1
 31           I     H   C           I               ? 2
 32           I    H  C             I               ? 1
 33           I      C  H           I   KICKED
 34           I      C      H       I
 35           I      C        H     I
 36           I      C          H   I               ? 5
 37           I           C      H  I               ? 3
 38           I       H      C      I   BOLTED      ? 2
 39           I       H    C        I               ? 2
 40           I    H     C          I               ? 3
 41           I       C  H          I   KICKED
 42           I       C    H        I
 43           I       C     H       I               ? 3
 44           I          C   H      I               ? 2
 45           I            C    H   I               ? 2
 46           I              C   H  I               ? 1
 47           I               CH    I               ? 1
 48           I           H    C    I   KICKED
 49           I          H     C    I
 50           I      H         C    I
 51           I   H            C    I
 52           IH               C    I               ? 5
 53           IH          C         I               ? 5
 54           IH     C              I               ? 2
 55           IH   C                I               ? 1
 56           I   C         H       I   BOLTED      ? 5
 57           I        C    H       I               ? 2
 58           I          C    H     I               ? 1
 59           I           C      H  I               ? 2
 60           I         H   C       I   BOLTED      ? 21
ILLEGAL MOVE. TRY AGAIN      ? 2
 61           I        H  C         I               ? 1
 62           I     H    C          I               ? 2
 63           I   H    C            I               ? 2
 64           IH     C              I               ? 3
 65           I   C     H           I   BOLTED      ? 2
 66           I     C    H          I               ? 1
 67           I      C     H        I               ? 2
 68           I        C   H        I               ? 2
 69           I       H  C          I   KICKED
THOSE KICKS LANDED YOU IN THE HOSPITAL! 안됐읍니다. 병원으로 가야겠읍니다.
 GET WELL SOON!!   쾌유를 빕니다!
ANOTHER ROUNDUP? NO 다시 한 번 하겠읍니까?
Ok
```

```
1 PRINT TAB( 26);"CORRAL"
2 PRINT TAB( 20);"CREATIVE COMPUTING"
3 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
4 PRINT:PRINT:PRINT
10 DIM A(21)
40 DIM S(2,9)
50 FOR I=1 TO 2:FOR J=0 TO 9
55 READ S(I,J):NEXT J:NEXT I
60 DATA 0,1,2,3,3,2,2,1,0,-1
70 DATA 1,2,3,4,5,4,3,2,1,0
110 PRINT "YOU ARE THE COWBOY. GO CATCH YOUR HORSE IN THE CORRAL!":PRINT
120 LINE INPUT "DO YOU WANT FULL INSTRUCTIONS? ";F$:PRINT
130 IF LEFT$(F$,1)="N" THEN 190
140 PRINT "YOU MOVE TOWARD YOUR HORSE 1 TO 5 STEPS AT A TIME."
150 PRINT "IF YOU MORE THAN HALVE THE SEPERATION HE WILL BOLT!"
160 PRINT "HE MAY ALSO BOLT WHEN HE IS CLOSE TO THE RAIL."
170 PRINT "WHEN YOU COME WITHIN 2 STEPS HE MAY KICK. BE CAREFUL!"
180 PRINT
190 PRINT "AFTER '?' TYPE IN A DIGIT FROM 1 TO 5 FOR THE COWBOY'S NEXT MOVE."
200 C=1:L=1:K=0:M=0:N=0:GOSUB 590
210 IF R>5 THEN Q=-Q
220 H=13+Q:GOSUB 600
230 T=2+P:PRINT
240 B$="
250 FOR J=1 TO 21:A(J)=32:NEXT
260 A(C)=67:A(H)=72
270 PRINT USING "###";N;:PRINT "",:PRINT "\";
280 FOR J=1 TO 21:PRINT CHR$(A(J));:NEXT
290 PRINT "\",B$;
300 X=ABS(H-C):L=SGN(H-C)
310 N=N+1:IF K>0 THEN 540
320 IF N>100 THEN 730
330 INPUT D
340 IF D>0 AND D<6 THEN 360
350 PRINT "ILLEGAL MOVE. TRY AGAIN.",;:GOTO 320
360 E=C+L*D:IF E<1 OR E>21 THEN 350
370 C=E:GOSUB 590
380 G=P:H=H+L*G:GOSUB 600
390 IF X<2*D AND D>1 THEN 440
400 IF H>1 AND H<20 THEN 480
410 GOSUB 590
420 IF R>2 THEN 480
430 IF X>7 THEN 240
440 G=9+2*P:H=H-L*G:L=-L:GOSUB 600
450 IF ABS(H-C)>1 THEN 470
460 H=H-3*L:GOSUB 600
470 B$="BOLTED      ":GOTO 250
480 IF ABS(H-C)>2 THEN 240
490 GOSUB 590
500 IF R>3 THEN 570
510 GOSUB 590
520 K=P+2:M=M+1:H=H-5*L:GOSUB 600
530 B$="KICKED":GOTO 250
540 IF M>T THEN 630
550 K=K-1:PRINT:GOSUB 590
560 H=H+L*(P+1):GOSUB 600:GOTO 240
570 IF H=C THEN 650
580 GOTO 240
590 R=INT(10*RND(1)):P=S(1,R):Q=S(2,R):RETURN
600 IF H<1 THEN H=1
610 IF H>21 THEN H=21
620 RETURN
630 PRINT:PRINT "THOSE KICKS LANDED YOU IN THE HOSPITAL!"
640 PRINT "GET WELL SOON!":GOTO 700
650 FOR J=1 TO 21:A(J)=32:NEXT:A(C)=35
660 PRINT ,"\";
670 FOR J=1 TO 21:PRINT CHR$(A(J));:NEXT
680 PRINT "\"
690 PRINT:PRINT "YIPPEE!! NOW SEE IF YOU CAN CATCH HIM IN FEWER MOVES.":PRINT
700 INPUT "ANOTHER ROUNDUP";F$
710 IF LEFT$(F$,1)="Y" OR LEFT$(F$,1)="Y" THEN 200
720 GOTO 740
730 PRINT:PRINT:PRINT "ENOUGH! YOU'D DO BETTER AS THE CAMP COOK!":GOTO 700
740 END
```

Dealer's Choice

(딜러의 선택)

텔리비젼의 프로, 'Dealer's Choice'를 기본으로 하여 만들어진 게임이다.

도전자인 당신에게 주어지는 군자금(軍資金)은 100달러. 여기서 나오는 5종류의 게임은 모두 카지노에서 유명한 트럼프 게임인데, TV 게임용으로 더 한층 드릴 있고 재미있게 만든 것이다.

```
RUN
                    DEALER'S CHOICE
                  CREATIVE COMPUTING
                MORRISTOWN, NEW JERSEY



THIS PROGRAM WILL SIMULATE THE T.V. SHOW, DEALER'S CHOICE.
YOU HAVE $100 TO START WITH. ENJOY THE GAME. 당신은 100 달러를 가지고
                                             시작합니다.
FOR THE FIRST GAME, WE WILL PLAY ON THE WHEEL OF CHANCE.
THE OBJECT IS SIMPLE. GUESS WHAT SUITE WILL APPEAR ON THE
WHEEL AND YOU WILL GET PAID AT THOSE ODDS IF YOU ARE RIGHT.
THEY ARE AS FOLLOWS:

1=DIAMONDS AT 11 TO 1 ODDS          2=SPADES AT 7 TO 1 ODDS.
3=HEARTS AT 3 TO 1 ODDS             4=CLUBS AT 3 TO 1 ODDS.
YOU MAY BET UP TO $25. GOOD LUCK! 25 달러까지 걸 수 있습니다. 행운을 빕니다.

WHAT SUITE DO YOU WANT? 1 어디에 걸겠읍니까?
WHAT IS THE BET? 25    거는 돈은? 25달러
O.K. NOW THAT YOUR BET IS IN, WE WILL SPIN
THE WHEEL, GOOD LUCK!
THE WHEEL IS SLOWING DOWN.
THE WHEEL IS STOPPING.
THE SUITE IS
**** 1 ****
YOU WIN ON DIAMONDS  적중했읍니다.
AT THE END OF PART 1, YOU HAVE $ 375 당신은 375달러가 되었읍니다.


THIS IS THE GAME OF IN BETWEEN. THE OBJECT IS: 5 CARDS WILL
BE DEALT OUT. IF ANY CARD IS LESS THAN A 3 OR GREATER THAN A
10, THE GAME IS OVER. YOU MAY BET UP TO $30. YOUR MONEY
WILL BE DOUBLED EACH TIME YOU ARE RIGHT. GOOD LUCK!

WHAT IS THE BET? 40
***YOU BET OVER THE HOUSE LIMIT ***  거는 돈이 너무 많습니다.
WHAT IS THE BET? 30
CARD NUMBER  1  IS A  4
YOU ARE STILL IN THE GAME. YOU HAVE  60
STOP OR GO? GO
CARD NUMBER  2  IS A  4
YOU ARE STILL IN THE GAME. YOU HAVE  120
STOP OR GO? GO
CARD NUMBER  3  IS A  7
YOU ARE STILL IN THE GAME. YOU HAVE  180
STOP OR GO? STOP
YOU WIN. AT THE END OF PART 2, YOU HAVE $ 555
당신이 이겼읍니다.

THIS IS THE GAME OF BLACKJACK <DEALER'S CHOICE STYLE>→ 이번에는
THE OBJECT IS TO BEAT THE DEALER WITH OVER 17 OR 21 OR  블랙잭입니다.
UNDER. YOU MAY BET UP TO $50. YOU MAY STOP WHEN YOU WISH.
IF YOU MAKE BLACKJACK, YOUR MONEY IS DOUBLED. 블랙잭이 되면, 당신 돈은 두
IF THE HOUSE DEALS OUT LESS THAN A TOTAL OF 17 IN 6 TRIES, 배가 됩니다.
YOU WILL KEEP THE MONEY YOU BET. GOOD LUCK!

THE DEALER WILL GET HIS CARDS FIRST
HERE I GO
THE CARD IS A  1
SO FAR: 1
THE CARD IS A  10
SO FAR: 11
THE CARD IS A  6
SO FAR: 17
I STOP. THE TOTAL FOR ME IS  17
NOW YOU GO
WHAT IS THE BET? 50  거는 돈은?
YOUR CARD IS A  5    카드는 5입니다.
SO FAR THE TOTAL FOR YOU IS  5
STOP OR GO? GO  계속 카드를 받겠읍니까?
YOUR CARD IS A  12   카드는 12입니다.
SO FAR THE TOTAL FOR YOU IS  17  여기까지 합계는 17입니다.
STOP OR GO? STOP  계속 카드를 받겠읍니까?
WE ARE THE SAME SO WE WILL PLAY AGAIN
THE DEALER WILL GET HIS CARDS FIRST

HERE I GO
THE CARD IS A  11
SO FAR: 11
THE CARD IS A  9
SO FAR: 20
I STOP. THE TOTAL FOR ME IS  20
NOW YOU GO

WHAT IS THE BET? 50
YOUR CARD IS A  1
SO FAR THE TOTAL FOR YOU IS  1
STOP OR GO? GO
YOUR CARD IS A  12
SO FAR THE TOTAL FOR YOU IS  13
STOP OR GO? GO
YOUR CARD IS A  1
SO FAR THE TOTAL FOR YOU IS  14
STOP OR GO? GO
YOUR CARD IS A  12
SO FAR THE TOTAL FOR YOU IS  26          마지막 찬스.
THE DEALER BEAT YOU. YOU LOSE            여기서 이기면 보너스
AT THE END OF PART 3, YOU HAVE $ 325     게임을 할 수 있읍니다.

NOW WE ENTER THE LAST CHANCE ROUND. IF YOU MAKE UP TO
$300 YOU WILL BE ABLE TO GO INTO THE BONUS ROUND. THE
OBJECT IS TO GUESS INTO WHICH CATEGORY THE TOTAL OF 5 CARDS 5장의
WILL ADD UP TO. THESE ARE THE CATEGORIES:     카드의 합계에 걸겠읍니다.

1=31-40 AT 1 TO 1 ODDS      2=41-50 AT 3 TO 1 ODDS
3=21-31 AT 3 TO 1 ODDS      4=6-20 AT 20 TO 1 ODDS
GOOD LUCK!!

AT THIS POINT IN THE GAME YOU HAVE $ 325
WHAT CATEGORY DO YOU WANT? 2  당신이 원하는 종류는?
WHAT IS THE BET? 25
THE CARDS ARE NOW BEING ADDED UP
GOOD LUCK!
CARD NUMBER  1  IS A  8
SO FAR:  8
CARD NUMBER  2  IS A  11
SO FAR:  19
CARD NUMBER  3  IS A  8
SO FAR:  27
CARD NUMBER  4  IS A  7
SO FAR:  34
CARD NUMBER  5  IS A  10          여기까지의 합계는 400 달러
SO FAR:  44
AT THE END OF THE GAME YOU HAVE A GRAND TOTAL OF $ 400
YOU ARE ELIGIBLE FOR THE BONUS ROUND. 보너스 게임을 할 수 있읍니다.
DO YOU WANT TO PLAY IT? YES   하겠읍니까?
THIS IS THE BONUS ROUND. IF YOU GET A TOTAL OF 1,000  만약 스페이드를 뽑지
WITHOUT GETTING A SPADE IN THE ROLLS, YOU WILL GET 않고 1000이 되면 상금
A GRAND PRIZE OF $10,000.00. YOU MAY STOP AT ANY POINT 1만 달러가 나옵니다.
DURING THE GAME. YOU WILL KEEP WHAT YOU MADE. GOOD LUCK!
  → 게임 도중 언제든지 Stop 할 수 있읍니다.
THE DICE ARE ROLLING 주사위를 굴립니다.
GOOD LUCK.
THE DICE ARE
****SPADES 200 ****
TOTAL  200
YOU LOSE THE MONEY FROM THE LAST CHANCE     당신이 졌읍니다.
ROUND BUT YOU STILL HAVE A GRAND TOTAL OF $ 400 그러나 400달러
THIS IS THE END OF THE GAME. I HOPE YOU ENJOYED IT.  남았읍니다.
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```
100 PRINT TAB( 21);"DEALER'S CHOICE"
110 PRINT TAB( 20);"CREATIVE COMPUTING"
120 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 PRINT:PRINT:PRINT
140 PRINT "THIS PROGRAM WILL SIMULATE THE T.V. SHOW, DEALER'S CHOICE."
150 PRINT "YOU HAVE $100 TO START WITH. ENJOY THE GAME.":PRINT
160 O=100
170 PRINT "FOR THE FIRST GAME, WE WILL PLAY ON THE WHEEL OF CHANCE."
180 PRINT "THE OBJECT IS SIMPLE. GUESS WHAT SUIT WILL APPEAR ON THE"
190 PRINT "WHEEL AND YOU WILL GET PAID AT THOSE ODDS IF YOU ARE RIGHT."
```

```
200 PRINT:PRINT "THE ODDS ARE AS FOLLOWS:":PRINT
210 PRINT "1 = DIAMONDS AT 11 TO 1 ODDS          2 = SPADES AT 1 TO 1 ODDS."
220 PRINT "3 = HEARTS AT 3 TO 1 ODDS             4 = CLUBS AT 3 TO 1 ODDS."
225 PRINT
230 PRINT "YOU MAY BET UP TO $25. GOOD LUCK!":PRINT
240 PRINT "WHAT SUIT DO YOU WANT";:INPUT A
250 IF A > 4 OR A < 1 THEN 270
260 IF A <=4 THEN 280
270 PRINT "*** YOU PICKED A WRONG SUIT ***":GOTO 240
280 PRINT "WHAT IS THE BET";:INPUT B8
290 IF B8 > 25 OR B8 <= 0 THEN 310
300 IF B8 <= 25 THEN 320
310 PRINT "*** YOU BET OVER THE HOUSE LIMIT ***":GOTO 280
320 PRINT:PRINT "O.K. NOW THAT YOUR BET IS IN, WE WILL SPIN"
330 PRINT "THE WHEEL. GOOD LUCK!":FOR B1=1 TO 10*570:NEXT B1
340 PRINT "THE WHEEL IS SLOWING DOWN."
350 FOR B1=1 TO 7*570:NEXT B1:PRINT "THE WHEEL IS STOPPING."
360 FOR B1=1 TO 4*570:NEXT B1
370 PRINT "THE SUIT IS ";:FOR B1=1 TO 4*570
380 NEXT B1
390 Z=INT(4*RND(1)+1):IF Z=1 THEN Z$="DIAMONDS":GOTO 399
392 IF Z=2 THEN Z$="SPADES":GOTO 399
394 IF Z=3 THEN Z$="HEARTS":GOTO 399
396 Z$="CLUBS"
399 PRINT "**** ";Z$;" ****"
400 IF Z=A THEN 420
410 IF Z <> A THEN 470
420 ON Z GOTO 430,440,450,460
430 O=O+(11*B8):PRINT "YOU WIN ON DIAMONDS!":GOTO 480
440 O=O+(1*B8):PRINT "YOU WIN ON SPADES!":GOTO  480
450 O=O+(3*B8):PRINT "YOU WIN ON HEARTS!":GOTO 480
460 O=O+(3*B8):PRINT "YOU WIN ON CLUBS!":GOTO 480
470 O=O-(1*B8):PRINT "YOU LOSE.":GOTO 480
480 PRINT:PRINT "AT THE END OF PART 1, YOU HAVE $";O;CHR$(8);"."
490 FOR P=1 TO 5:PRINT:NEXT P
500 PRINT "THIS IS THE GAME OF IN BETWEEN. THE OBJECT IS: 5 CARDS WILL"
510 PRINT "BE DEALT OUT. IF ANY CARD IS LESS THAN A 3 OR GREATER THAN A"
520 PRINT "10, THE GAME IS OVER. YOU MAY BET UP TO $30. YOUR MONEY"
530 PRINT "WILL BE DOUBLED EACH TIME YOU ARE RIGHT. GOOD LUCK!":PRINT
540 PRINT "WHAT IS THE BET";:INPUT A
550 IF A > 30 THEN PRINT "*** YOU BET OVER THE HOUSE LIMIT ***":GOTO 540
560 T=T+1:Z=INT(12*RND(1)+1)
570 PRINT "CARD NUMBER";T;"IS A";Z;CHR$(8);".":B=B+(2*A)
580 IF Z < 3 OR Z > 10 THEN 630
590 IF T=5 THEN 650
600 PRINT "YOU ARE STILL IN THE GAME. YOU HAVE $";B;CHR$(8);"."
610 PRINT "STOP OR GO";:INPUT A$:IF LEFT$(A$,1)="G" THEN 560
620 IF LEFT$(A$,1)="S" THEN 650
630 O=O-A
640 PRINT "YOU LOST. AT THE END OF PART 2, YOU HAVE $";O;CHR$(8);".":GOTO 660
650 PRINT "YOU WIN. AT THE END OF PART 2, YOU HAVE $";B+O;CHR$(8);".":O=B+O
660 FOR P=1 TO 5:PRINT:NEXT P
670 PRINT "THIS IS THE GAME OF BLACKJACK <DEALER'S CHOICE STYLE>"
675 PRINT
680 PRINT "THE OBJECT IS TO BEAT THE DEALER WITH OVER 17 OR 21 OR"
690 PRINT "UNDER. YOU MAY BET UP TO $50. YOU MAY STOP WHEN YOU WISH."
695 PRINT
700 PRINT "IF YOU MAKE BLACKJACK, YOUR MONEY IS DOUBLED."
710 PRINT "IF THE HOUSE DEALS OUT LESS THAN A TOTAL OF 17 IN 6 TRIES,"
720 PRINT "YOU WILL KEEP THE MONEY YOU BET. GOOD LUCK!":PRINT
730 Z5=0:Z1=0:PRINT "THE DEALER WILL GET HIS CARDS FIRST":PRINT
735 INPUT "ARE YOU READY";R$:PRINT
740 C=0:C3=0
750 PRINT "HERE I GO:"
760 Q=INT(12*RND(1)+1)
770 Z5=Q+Z5
780 PRINT "THE CARD IS A ";Q;CHR$(8);".":C=C+1
790 PRINT "DEALER'S TOTAL SO FAR:";Z5;CHR$(8);".":IF C=6 THEN 850
800 IF Z5<17 THEN 760
810 IF Z5 > 21 THEN 910
820 IF Z5=21 THEN 880
830 IF Z5 < 21 THEN 870
840 IF Z5 >= 17 THEN 870
850 IF Z5 < 17 THEN 890
860 IF Z5 >= 17 THEN 800
870 PRINT:PRINT "I STOP. THE TOTAL FOR ME IS";Z5;CHR$(8);"."
875 PRINT:PRINT "NOW YOU GO:":PRINT:GOTO 930
880 PRINT:PRINT "I GOT BLACKJACK!":PRINT:GOTO 930
890 PRINT:PRINT "THE HOUSE DELT OUT LESS THAN 17. NOW YOU MUST TRY TO"
900 PRINT "BEAT ME.";:PRINT:GOTO 930
910 PRINT:PRINT "I BLEW IT. YOU WIN THE GREATEST AMOUNT ALLOWED TO BE"
920 PRINT "BET BY THE HOUSE.":GOTO 1160
930 PRINT "WHAT IS YOUR BET";:INPUT A
940 IF A > O THEN 980
950 IF A > 50 OR A <= 0 THEN 970
960 IF A <= 50 THEN 990
970 PRINT "*** YOU BET OVER THE HOUSE LIMIT ***":GOTO 930
980 PRINT "*** YOU BET OVER WHAT YOU HAVE ***":GOTO 930
990 Q1=INT(12*RND(1)+1):PRINT:PRINT "YOUR CARD IS A";Q1;CHR$(8);".":C3=C3+1
1000 Z1=Q1+Z1:PRINT "SO FAR THE TOTAL FOR YOU IS";Z1;CHR$(8);".":IF C3=6 THEN 1090
1010 IF Z1 > 21 THEN 1120
1020 PRINT:PRINT "STOP OR GO";:INPUT A$
1030 IF LEFT$(A$,1)="S" THEN 1050
1040 IF LEFT$(A$,1)="G" THEN 990
1050 PRINT:IF Z1=Z5 THEN 1100
1060 IF Z1 < Z5 THEN 1120
1070 IF Z1=21 THEN 1110
1080 IF Z5 <Z1 THEN 1130
1090 IF Z1 < 17 THEN 1140
1100 PRINT "WE HAVE THE SAME TOTAL, SO WE WILL PLAY AGAIN.":GOTO 730
1110 O=O+(2*A):PRINT "YOU BEAT THE DEALER WITH BLACKJACK!!":GOTO 1170
1120 O=O-(1*A):PRINT "THE DEALER BEAT YOU. YOU LOSE.":GOTO 1170
1130 O=O+(1*A):PRINT "THE DEALER LOST. YOU WIN!":GOTO 1170
1140 O=O+(1*A):PRINT "THE HOUSE DELT OUT LESS THAN 17 IN"
1150 PRINT "6 TRIES. YOU GET THE MONEY YOU BET!":GOTO 1170
1160 O=O+50:PRINT "YOU KEEP IT WITH OUR BEST WISHES.":GOTO 1170
1170 PRINT:PRINT "AT THE END OF PART 3, YOU HAVE $";O;CHR$(8);"."
1180 IF O<=0 THEN 1580
1190 FOR P=1 TO 5:PRINT:NEXT P
1200 PRINT "NOW WE ENTER THE LAST CHANCE ROUND. IF YOU MAKE UP TO"
1210 PRINT "$300 YOU WILL BE ABLE TO GO INTO THE BONUS ROUND. THE"
1220 PRINT "OBJECT IS TO GUESS INTO WHICH CATEGORY THE TOTAL OF 5 CARDS"
1230 PRINT "WILL ADD UP TO. THESE ARE THE CATEGORIES:":PRINT
1240 PRINT "1 = 31-40 AT 1 TO 1 ODDS     2 = 41-50 AT 3 TO 1 ODDS"
1250 PRINT "3 = 21-31 AT 3 TO 1 ODDS     4 = 6-20 AT 20 TO 1 ODDS"
1260 PRINT:PRINT "GOOD LUCK!!":PRINT
1270 PRINT "AT THIS POINT IN THE GAME YOU HAVE $";O;CHR$(8);".":PRINT
1280 PRINT "WHAT CATEGORY DO YOU WANT";:INPUT A
1290 IF A <= 4 THEN 1320
1300 IF A > 4 THEN 1310
1310 PRINT "*** YOU BET ON A WRONG CATEGORY ***":GOTO 1280
1320 PRINT "WHAT IS THE BET";:INPUT B:PRINT
1330 IF B <= O THEN 1360
1340 IF B > O THEN 1350
1350 PRINT "*** YOU BET OVER WHAT YOU HAVE ***":GOTO 1320
1360 PRINT "THE CARDS ARE NOW BEING ADDED UP.":PRINT "GOOD LUCK!"
1370 Q=INT(12*RND(1)+1):C1=C1+1
1380 PRINT "CARD NUMBER";C1;"IS A";Q;CHR$(8);"."
1390 Z=Z+Q:PRINT "YOUR TOTAL SO FAR:";Z;CHR$(8);".":PRINT
1400 IF C1=5 THEN 1420
1410 GOTO 1370
1420 ON A GOTO 1430,1460,1490,1520
1430 IF Z < 31 THEN 1540
1440 IF Z < 40 THEN 1550
1450 IF Z > 40 THEN 1540
1460 IF Z < 41 THEN 1540
1470 IF Z < 50 THEN 1560
1480 IF Z > 50 THEN 1540
1490 IF Z < 21 THEN 1540
1500 IF Z < 31 THEN 1560
1510 IF Z > 31 THEN 1540
1520 IF Z < 6 THEN 1540
1530 IF Z < 20 THEN 1570
1540 O=O-(1*B):PRINT "YOU LOSE.":GOTO 1580
1550 O=O+(1*B):PRINT "YOU WIN!":GOTO 1580
1560 O=O+(3*B):GOTO 1580
1570 O=O+(20*B):PRINT "YOU WIN!":GOTO 1580
1580 PRINT:PRINT "AT THE END OF THE GAME YOU HAVE A GRAND TOTAL OF $";O;CHR$(8);"."
1590 IF O < 300 THEN 1940
1600 FOR X=1 TO 6:PRINT CHR$(7);:FOR B1=1 TO 570:NEXT B1:NEXT X
1605 PRINT CHR$(26)
1610 PRINT "YOU ARE ELIGIBLE FOR THE BONUS ROUND."
1620 PRINT "DO YOU WANT TO PLAY IT";:INPUT A$:PRINT
1630 IF LEFT$(A$,1)="N" THEN 1940
1640 PRINT "THIS IS THE BONUS ROUND. IF YOU GET A TOTAL OF 1,000"
1650 PRINT "WITHOUT GETTING A SPADE IN THE ROLLS, YOU WILL GET"
1660 PRINT "A GRAND PRIZE OF $10,000.00. YOU MAY STOP AT ANY POINT"
1670 PRINT "DURING THE GAME. YOU WILL KEEP WHAT YOU MADE. GOOD LUCK!"
1680 PRINT
1690 DIM A(5),B(4):A9$="SPADES"
1700 PRINT "THE DICE ARE ROLLING.":PRINT "GOOD LUCK."
1710 PRINT "THE DICE ARE"
1720 FOR B1=1 TO 570*5:NEXT B1
1730 X=INT(5*RND(1)+1)
1740 A(1)=50:A(2)=100:A(3)=150:A(4)=200:A(5)=0
1750 Y=INT(4*RND(1)+1)
1760 B(1)=50:B(2)=100:B(3)=150:B(4)=200
1770 IF A(X)=0 THEN 1790
1780 PRINT "**** ";A(X);B(Y);"****"
1785 PRINT "TOTAL SO FAR:";A(X)+B(Y);CHR$(8);".":GOTO 1810
1790 PRINT "**** ";A9$;B(Y);"****"
1800 PRINT "TOTAL SO FAR:";B(Y);CHR$(8);".":GOTO 1870
1810 B7=B7+(A(X)+B(Y)):PRINT "YOU NOW HAVE";B7;CHR$(8);".":PRINT
1815 IF B7 >= 1000 THEN 1890
1820 PRINT "STOP OR GO":INPUT B$
1830 IF LEFT$(B$,1)="G" THEN 1700
1840 PRINT "SMART MOVE. YOU GET THE MONEY FROM THE BEGINNING OF"
1850 PRINT "THE GAME PLUS THE BONUS ROUND. AT THE END OF THE GAME"
1860 PRINT "YOU HAVE THE GRAND TOTAL OF $";B7+O;CHR$(8);".":GOTO 1940
1870 PRINT "YOU LOSE THE MONEY FROM THE LAST CHANCE"
1880 PRINT "ROUND BUT YOU STILL HAVE A GRAND TOTAL OF $";O;CHR$(8);".":GOTO 1940
1890 FOR T=1 TO 3:PRINT CHR$(7);:FOR B1=1 TO 570:NEXT B1:NEXT T
1900 B7=O+10000:PRINT TAB( 15);"**** CONGRATULATIONS ****"
1910 PRINT "YOU WON THE GRAND PRIZE. AT THE END OF THE GAME, YOU HAVE"
1920 FOR P=1 TO 3:PRINT:NEXT P
1930 PRINT TAB( 18);:PRINT USING "***** $$#,### *****";B7
1940 PRINT:PRINT "THIS IS THE END OF THE GAME. I HOPE YOU ENJOYED IT."
1950 END
```

Deepspace (우주 순찰)

새로운 우주 전쟁 게임이다.

지금부터 당신은 사령관이 되어, 정찰기, 순양함, 그리고 우주 전함을 지휘하면서 혹성계를 순찰한다.

앗, 적의 우주선이다. 적의 우주선이 나타나면 기회를 놓치지 말고 공격해서 파괴시킨다. 가엾게도……. 어쨌든 당신은 점수를 얻는다. 그러나, 때로는 불의의 공격을 받는 일도 있다. 적의 공격을 받아 100포인트 이상 파손되면, 그 함정은 파괴된다.

※ 전황(戰況) 보고 시간을 짧게 하면, 게임 전개가 빨라진다.

Deepspace originally appeared in *Creative Computing*, Mar/Apr 1976.

```
RUN
                        DEEPSPACE
                    CREATIVE COMPUTING
                  MORRISTOWN, NEW JERSEY


THIS IS DEEPSPACE, A TACTICAL SIMULATION OF SHIP TO SHIP
COMBAT IN DEEP SPACE.
DO YOU WISH INSTRUCTIONS? YES   설명이 필요합니까?
YOU ARE ONE OF A GROUP OF CAPTAINS ASSIGNED TO PATROL A
SECTION OF YOUR STAR EMPIRE'S BORDER AGAINST HOSTILE
ALIENS. ALL YOUR ENCOUNTERS HERE WILL BE AGAINST HOSTILE
VESSELS. YOU WILL FIRST BE REQUIRED TO SELECT A VESSEL
FROM ONE OF THREE TYPES, EACH WITH ITS OWN CHARACTERISTICS:
                             적하 능력
TYPE            SPEED 속도     CARGO SPACE    PROTECTION 방비
1 SCOUT 정찰기  10X           16             1
2 CRUISER순양함4X             24             2
3 BATTLESHIP   2X            30             5
  우주 전함
SPEED IS GIVEN RELATIVE TO THE OTHER SHIPS. 속도는 다른 배에 대한 상대 속도
CARGO SPACE IS IN UNITS OF SPACE ABOARD SHIP WHICH CAN BE
FILLED WITH WEAPONS.   적하 능력에 따라 무기를 선택할 수 있습니다.
PROTECTION IS THE RELATIVE STRENGTH OF THE SHIP'S ARMOR
AND FORCE FIELDS.

ONCE A SHIP HAS BEEN SELECTED, YOU WILL BE INSTRUCTED TO ARM
IT WITH WEAPONRY FROM THE FOLLOWING LIST:  무기는 아래와 같습니다.
                                   적하 능력
TYPE                              CARGO SPACE    REL. STRENGTH 강도
1 PHASER BANKS                         12              4
2 ANTI-MATTER MISSILE 비물질 미사일    4              20
3 HYPERSPACE LANCE 초공간 미사일       4              16
4 PHOTON TORPEDO 양자 어뢰             2              10
5 HYPERON NEUTRALIZATION FIELD ↘      20              6
                        중립 지대 ↙
WEAPONS #1 & #5 CAN BE FIRED 100 TIMES EACH; ALL OTHERS CAN
BE FIRED ONCE FOR EACH ON BOARD.   무기 #1과 #5는 100초마다 발사할
A TYPICAL LOAD FOR A CRUISER MIGHT CONSIST OF: ↘        수 있습니다.
          1-#1 PHASER BANK          = 12
          2-#3 HYPERSPACE LANCES    =  8     순양함은 다음과 같습니다.
          2-#4 PHOTON TORPEDOES     =  4
                                 ---------
                                    24 UNITS OF CARGO
 A WORD OF CAUTION: FIRING HIGH YIELD WEAPONS AT CLOSE (<100)
RANGE CAN BE DANGEROUS TO YOUR SHIP AND MINIMAL DAMAGE CAN
OCCUR AS FAR OUT AS 200 IN SOME CIRCUMSTANCES.

RANGE IS GIVEN IN THOUSANDS OF KILOMETERS.
     ***************
     MANUEVER CHART

 1        FIRE PHASERS
 2        FIRE ANTI-MATTER MISSILE
 3        FIRE HYPERSPACE LANCE
 4        FIRE PHOTON TORPEDO
 5        ACTIVE HYPERON NEUTRALIZATION FIELD
 6        SELF-DESTRUCT
 7        CHANGE VELOCITY
 8        DISENGAGE
 9        PROCEED

YOU HAVE A CHOICE OF THREE SYSTEMS TO PATROL. 당신은 순찰할 우주 셋
1 ORION                                        중 선택합니다.
2 DENEB
3 ARCTURUS
SELECT A SYSTEM(1-3)? 3   어느 우주를 선택하겠읍니까?
WHICH SPACECRAFT WOULD YOU LIKE(1-3)? 2   우주선은?
YOU HAVE  24 UNITS OF CARGO SPACE TO FILL WITH WEAPONRY.
CHOOSE A WEAPON AND THE AMOUNT YOU WISH.? 1,1  무기와 그 양은?
YOU HAVE  12 UNITS OF CARGO SPACE TO FILL WITH WEAPONRY.
CHOOSE A WEAPON AND THE AMOUNT YOU WISH.? 2,1
YOU HAVE  8 UNITS OF CARGO SPACE TO FILL WITH WEAPONRY.
CHOOSE A WEAPON AND THE AMOUNT YOU WISH.? 3,1
YOU HAVE  4 UNITS OF CARGO SPACE TO FILL WITH WEAPONRY.
CHOOSE A WEAPON AND THE AMOUNT YOU WISH.? 4,2

RANGE TO TARGET: 743.491
RELATIVE VELOCITY: 3.24654
ACTION? 9   동작은?


RANGE TO TARGET: 682.097
RELATIVE VELOCITY: 3.24654
ACTION? 9


RANGE TO TARGET: 620.703
RELATIVE VELOCITY: 3.24654
ACTION? 7
CHANGE TO BE EFFECTED? .5

RANGE TO TARGET: 620.703
RELATIVE VELOCITY: 3.74654
ACTION? 4
SCANNERS REPORT ENEMY DAMAGE NOW: 4.58858  보고：적의 피해는……
DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT: 5.20508


RANGE TO TARGET: 547.271
RELATIVE VELOCITY: 3.74654
ACTION? 1
SCANNERS REPORT ENEMY DAMAGE NOW: 5.3724
DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT: 11.7754


RANGE TO TARGET: 473.839
RELATIVE VELOCITY: 3.74654
ACTION? 3
SCANNERS REPORT ENEMY DAMAGE NOW: 23.1197
DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT: 20.3527


RANGE TO TARGET: 400.407
RELATIVE VELOCITY: 3.74654
ACTION? 2
SCANNERS REPORT ENEMY DAMAGE NOW: 47.8738
DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT: 32.0649

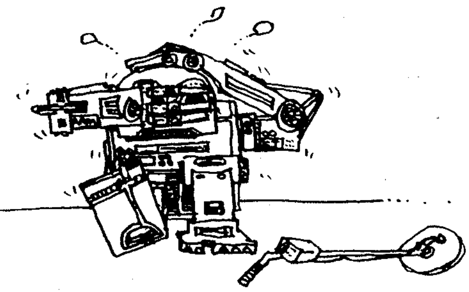

RANGE TO TARGET: 326.975
RELATIVE VELOCITY: 3.74654
ACTION? 7
CHANGE TO BE EFFECTED? -2

RANGE TO TARGET: 326.975
RELATIVE VELOCITY: 1.74654
ACTION? 1
SCANNERS REPORT ENEMY DAMAGE NOW: 54.5828
DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT: 49.1026


RANGE TO TARGET: 298.689
RELATIVE VELOCITY: 1.74654
ACTION? 8
ANOTHER BATTLE? NO
TRY AGAIN LATER!
OK
```

```
100 PRINT CHR$(26);TAB( 24);"DEEPSPACE"
110 PRINT TAB( 20);"CREATIVE COMPUTING"
120 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
130 PRINT:PRINT
150 PRINT "THIS IS DEEPSPACE, A TACTICAL SIMULATION OF SHIP TO SHIP"
160 PRINT "COMBAT IN DEEP SPACE."
165 PRINT
170 PRINT "DO YOU WISH INSTRUCTIONS";:INPUT I$
180 IF LEFT$(I$,1)="N" THEN 610
190 PRINT CHR$(26)
200 PRINT "YOU ARE ONE OF A GROUP OF CAPTAINS ASSIGNED TO PATROL A"
210 PRINT "SECTION OF YOUR STAR EMPIRE'S BORDER AGAINST HOSTILE"
220 PRINT "ALIENS. ALL YOUR ENCOUNTERS HERE WILL BE AGAINST HOSTILE"
230 PRINT "VESSELS. YOU WILL FIRST BE REQUIRED TO SELECT A VESSEL"
240 PRINT "FROM ONE OF THREE TYPES, EACH WITH ITS OWN CHARACTERISTICS:"
260 PRINT:PRINT "    TYPE","SPEED","CARGO SPACE","PROTECTION"
265 PRINT "   ------","-----","-----------","----------"
270 PRINT "1- SCOUT"," 10X","     16","    1"
280 PRINT "2- CRUISER","  4X","     24","    2"
290 PRINT "3- BATTLESHIP","  2X","     30","    5"
310 PRINT:PRINT "SPEED IS GIVEN RELATIVE TO THE OTHER SHIPS."
320 PRINT "CARGO SPACE IS IN UNITS OF SPACE ABOARD SHIP WHICH CAN BE"
330 PRINT "FILLED WITH WEAPONS."
340 PRINT "PROTECTION IS THE RELATIVE STRENGTH OF THE SHIP'S ARMOR"
350 PRINT "AND FORCE FIELDS."
360 GOSUB 10000
370 PRINT:PRINT "ONCE A SHIP HAS BEEN SELECTED, YOU WILL BE INSTRUCTED TO ARM"
380 PRINT "IT WITH WEAPONRY FROM THE FOLLOWING LIST:"
390 PRINT
400 PRINT "     TYPE                         CARGO SPACE    REL. STRENGTH"
405 PRINT "    ------                        -----------    -------------"
410 PRINT "1- PHASER BANKS                       12              4"
420 PRINT "2- ANTI-MATTER MISSILE                 4             20"
430 PRINT "3- HYPERSPACE LANCE                    4             16"
440 PRINT "4- PHOTON TORPEDO                      2             10"
450 PRINT "5- HYPERON NEUTRALIZATION FIELD   20                  6"
470 PRINT:PRINT "WEAPONS #1 & #5 CAN BE FIRED 100 TIMES EACH; ALL OTHERS CAN"
480 PRINT "BE FIRED ONCE FOR EACH ON BOARD."
485 PRINT
490 PRINT "A TYPICAL LOAD FOR A CRUISER MIGHT CONSIST OF:"
500 PRINT "          1-#1 PHASER BANK          = 12"
510 PRINT "          2-#3 HYPERSPACE LANCES    =  8"
520 PRINT "          2-#4 PHOTON TORPEDOES     =  4"
530 PRINT "                                 ---------"
540 PRINT "                               24 UNITS OF CARGO"
545 GOSUB 10000
550 PRINT " A WORD OF CAUTION: FIRING HIGH YIELD WEAPONS AT CLOSE (<100)"
560 PRINT "RANGE CAN BE DANGEROUS TO YOUR SHIP AND MINIMAL DAMAGE CAN"
570 PRINT "OCCUR AS FAR OUT AS 200 IN SOME CIRCUMSTANCES."
590 PRINT:PRINT "RANGE IS GIVEN IN THOUSANDS OF KILOMETERS."
600 GOTO 640
610 PRINT "DO YOU WISH A MANEUVER CHART";:INPUT M$
620 IF LEFT$(M$,1)="N" THEN 770
640 PRINT
650 PRINT "     MANEUVER CHART":PRINT "     --------------"
670 PRINT " 1       FIRE PHASERS"
680 PRINT " 2       FIRE ANTI-MATTER MISSILE"
690 PRINT " 3       FIRE HYPERSPACE LANCE"
700 PRINT " 4       FIRE PHOTON TORPEDO"
710 PRINT " 5       ACTIVE HYPERON NEUTRALIZATION FIELD"
720 PRINT " 6       SELF-DESTRUCT"
730 PRINT " 7       CHANGE VELOCITY"
740 PRINT " 8       DISENGAGE"
750 PRINT " 9       PROCEED"
770 PRINT:PRINT "YOU HAVE A CHOICE OF THREE SYSTEMS TO PATROL."
780 PRINT "1 - ORION"
790 PRINT "2 - DENEB"
800 PRINT "3 - ARCTURUS"
810 PRINT "SELECT A SYSTEM (1-3)";:INPUT S9
820 IF S9=1 THEN 2380
830 IF S9=2 THEN 2430
840 GOTO 2480
850 D0=0
860 D1=0
870 N1=0
880 N2=0
890 N3=0
900 N4=0
910 D=0
920 PRINT "WHICH SPACECRAFT WOULD YOU LIKE (1-3)";:INPUT S
930 ON S GOTO 1790,1830,1870
960 GOTO 920
970 C=C0
980 PRINT "YOU HAVE";C;"UNITS OF CARGO SPACE TO FILL WITH WEAPONRY."
990 PRINT "CHOOSE A WEAPON AND THE AMOUNT YOU WISH";:INPUT W,N
1000 ON W GOTO 1910,2010,2100,2190,2280
1050 GOTO 980
1060 IF N*C1>C THEN 2530
1070 C=C-N*C1
1080 ON W GOTO 1990,2080,2170,2260
1120 GOTO 2360
1130 IF C>1 THEN 980
1140 REM
1150 S1=S0*RND(0)
1160 R=(3*RND(0)+5)*100
1180 PRINT:PRINT "RANGE TO TARGET:";R
1190 PRINT "RELATIVE VELOCITY:";S1
1200 PRINT "ACTION";:INPUT M
1210 ON M GOTO 1940,2030,2120,2210,2310,1660,1390,2760
1290 IF R<500 THEN 1500
1300 IF S1>0 THEN 1330
1310 R=R+(S1*8.3)^1.25
1320 GOTO 1340
1330 R=R-(S1*8.3)^1.25
1340 IF R>1500 THEN 2590
1350 IF R>0 THEN 1370
1360 R=-R
1370 PRINT
1380 GOTO 1180
1390 PRINT "CHANGE TO BE EFFECTED";:INPUT S2
1400 IF (S1+S2)>S0 THEN 2550
1410 S1=S1+S2
1420 GOTO 1180
1430 F0=P1*(Z/R)^1.5
1440 REM
1450 D0=(2*F0+3*F0*RND(0))/5
1460 D=D+D0
1470 PRINT "SCANNERS REPORT ENEMY DAMAGE NOW:";D
1480 IF D>99 THEN 2720
1490 GOTO 1510
1500 D0=0
1510 REM
1520 K=E1+E2*RND(0)
1530 REM
1540 E=E3+E4*RND(0)+5/P0*RND(0)
1550 REM
1560 F3=E*(K/R)^1.85
1570 D2=(3*F3+3*F3*RND(0))/5.5
1580 D1=D1+D2
1590 IF (Z*D0)/(R*500)>2.2 THEN 1620
1600 D3=D0*2/(R^2*P0)
1610 D1=D1+D3
1620 PRINT "DAMAGE CONTROL REPORTS YOUR VESSEL DAMAGE AT:";D1
1630 IF D1>99 THEN 2740
1640 IF D>99 THEN 2760
1650 GOTO 1300
1660 PRINT "SELF DESTRUCT FAILSAFE ACTIVATED!!"
1670 PRINT "INPUT 1 TO RELEASE FAILSAFE";:INPUT U
1680 IF U=1 THEN 1700
1690 GOTO 1290
1700 PRINT "SELF DESTRUCT ACCOMPLISHED."
1710 IF R>60 THEN 1740
1720 PRINT "ENEMY VESSEL ALSO DESTROYED."
1730 GOTO 2760
1740 D4=3200/R
1750 D=D+D4
1760 IF D>99 THEN 1720
1770 PRINT "ENEMY VESSEL SURVIVES WITH";D;"DAMAGE."
1780 GOTO 2760
1790 S0=10
1800 C0=16
1810 P0=1
1820 GOTO 970
1830 S0=4
1840 C0=24
1850 P0=2
1860 GOTO 970
1870 S0=2
1880 C0=30
1890 P0=5
1900 GOTO 970
1910 C1=12
1930 GOTO 1060
1940 P1=4
1950 IF N1=0 THEN 2160
1960 N1=N1-1
1970 Z=200
1980 GOTO 1430
1990 N1=N1+N
2000 GOTO 1130
2010 C1=4
2020 GOTO 1060
2030 P1=20
2040 IF N2=0 THEN 2640
2050 N2=N2-1
2060 Z=500
2070 GOTO 1430
2080 N2=N2+N
2090 GOTO 1130
2100 C1=4
2110 GOTO 1060
2120 P1=16
2130 IF N3=0 THEN 2660
2140 N3=N3-1
2150 Z=550
2160 GOTO 1430
2170 N3=N3+N
2180 GOTO 1130
2190 C1=2
2200 GOTO 1060
2210 P1=10
2220 IF N4=0 THEN 2680
2230 N4=N4-1
2240 Z=400
2250 GOTO 1430
2260 N4=N4+N
2270 GOTO 1130
2280 C1=.2
2290 N=100
2300 GOTO 1060
2310 P1=6
2320 IF N5=0 THEN 2700
2330 N5=N5-1
2340 Z=250
2350 GOTO 1430
2360 N5=N5+N
2370 GOTO 1130
2380 E1=150
2390 E2=500
2400 E3=3
2410 E4=4
2420 GOTO 850
2430 E1=200
2440 E2=350
2450 E3=4
2460 E4=3
2470 GOTO 850
2480 E1=150
2490 E2=400
2500 E3=5
2510 E4=2
2520 GOTO 850
2530 PRINT "NOT ENOUGH SPACE. RESELECT."
2540 GOTO 980
2550 PRINT "CHANGE BEYOND MAXIMUM POSSIBLE."
2560 PRINT "INCREASING TO MAXIMUM."
2570 S1=S0
2580 GOTO 1300
2590 PRINT "OUT OF SENSOR RANGE. AUTOMATIC DISENGAGE."
2600 GOTO 2760
2610 PRINT "PHASER BANKS DRAINED."
2620 PRINT "SELECT ANOTHER COURSE OF ACTION."
2630 GOTO 1200
2640 PRINT " ALL ANTI-MATTER MISSLES EXPENDED."
2650 GOTO 2620
2660 PRINT "ALL HYPERSPACE LANCES EXPENDED."
2670 GOTO 2620
2680 PRINT "ALL PHOTON TORPEDO TUBES EMPTY."
2690 GOTO 2620
2700 PRINT "HYPERON NEUTRALIZATION FIELD DRAINED."
2710 GOTO 2620
2720 PRINT "ENEMY VESSEL DESTROYED!"
2730 GOTO 1510
2740 PRINT "YOUR VESSEL HAS BEEN DESTROYED!"
2760 PRINT "ANOTHER BATTLE";:INPUT R$
2770 IF LEFT$(R$,1)="Y" THEN 810
2780 PRINT:PRINT "TRY AGAIN LATER!":PRINT
2790 END
10000 PRINT LINE INPUT "ENTER 'RETURN' TO CONTINUE. ";XX$
10010 PRINT CHR$(26)
10020 RETURN
```

Defuse (폭탄찾기)



당신은 가로, 세로, 높이에 각각 100개씩(0 ~99)의 방이 있는, 따라서 전체적으로는 100만개의 방이 있는 거대한 빌딩에 있다. 따르르릉……! 지금 당신에게 괴한으로부터 전화가 걸려왔다. 건물의 어딘가에 폭탄을 장치했다는 것이다. 예고 시간은 폭발 200초 전, 그 안에 폭탄을 찾아내지 못하면 건물은 산산 조각이 나고 만다.

자아, 200초 안에 폭탄을 어떻게 찾을 것인가? 당신의 의지가 되는 것은, 폭탄과의 거리에 따라 신호를 내는 탐지기뿐이다. 수사는 1층 제일 끝방(0, 0, 0)에서부터 시작하는데, 한 방을 수색하는 데에 10초가 걸린다. 200초가 지나면 건물은 폭파된다. 그렇다면 20회의 수사로 폭탄을 찾아내야만 한다. 과연 찾아낼 수 있을까?

이런 종류의 게임에는 요령이 있게 마련이다. 그 요령만 알면 폭탄찾기가 아주 쉬워진다. 뭐, 요령을 알았다고? 쉿! 그 요령은 당신만 알고, 다른 사람에게는 비밀로…….

```
RUN
                        DEFUSE
                   CREATIVE COMPUTING
                 MORRISTOWN, NEW JERSEY

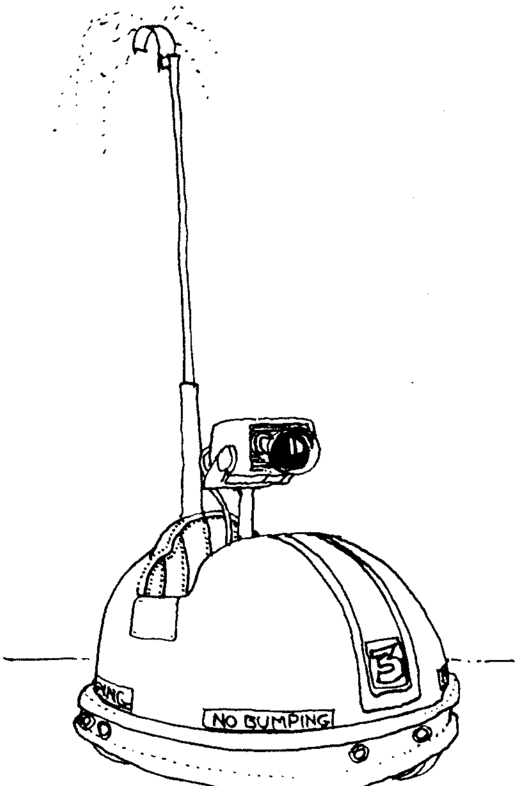

YOU ARE IN A GOVERNMENT EXPERIMENTAL BUILDING WITH   길이(0 ~ 99)
1,000,000 ROOMS IN IT. THE BUILDING IS 100 ROOMS     넓이(0 ~ 99)
LONG(0-99), 100 ROOMS WIDE(0-99), AND 100 ROOMS HIGH(0-99). 높이(0 ~ 99)
당신은 1,000,000 개의 방이 있는 빌딩에 있읍니다.
IN IT A BOMB IS HIDDEN. THE BOMB SENDS OUT SIGNALS THAT 폭탄을 200초 이내에
GET STRONGER AS YOU GET CLOSER. YOU HAVE 200 SECONDS     찾아야 합니다.
TO DEACTIVATE IT. 폭탄에 접근할수록 신호가 강하게 나옵니다.

SIGNAL       L    W    H       SEC.        COORDINATES(L,W,H)
 1454.99     0    0    0        0          ? 90,90,90
 9454.11     90   90   90       10         ? 80,80,90
 9464.21     80   80   90       20         ? 80,80,80
 9535.79     80   80   80       30         ? 80,80,70
 8535.79     80   80   70       40         ? 80,80,85
 9964.21     80   80   85       50         ? 80,80,86
 9864.21     80   80   86       60         ? 80,80,84
 9935.79     80   80   84       70         ? 80,70,85
 9974.21     80   70   85       80         ? 80,60,85
 9984.21     80   60   85       90         ? 80,50,85
 9994.21     80   50   85       100        ? 80,45,85
 9999.21     80   45   85       110        ? 80,40,85
 9995.79     80   40   85       120        ? 70,45,85
 9999.31     70   45   85       130        ? 40,45,85
 9999.61     40   45   85       140        ? 30,45,85
 9999.71     30   45   85       150        ? 20,45,85
 9999.81     20   45   85       160        ? 0,45,85
 9999.99     0    45   85       170        ? 1,45,85
BOMB DEACTIVATED AT 180  SECONDS!!! 180초, 위험합니다.
WANT TO PLAY AGAIN? YES              다시 한 번 하겠읍니까?

SIGNAL       L    W    H       SEC.        COORDINATES(L,W,H)
 4969.04     0    0    0        0          ? 0,0,50
 9969.04     0    0    50       10         ? 0,0,60
 9030.96     0    0    60       20         ? 0,0,40
 8969.04     0    0    40       30         ? 0,0,70
 8030.96     0    0    70       40         ? 0,50,60
 8980.96     0    50   60       50         ? 0,90,60
 8940.96     0    90   60       60         ? 50,0,60
 9030.46     50   0    60       70         ? 0,10,60
 9020.96     0    10   60       80         ? 1,0,60
 9030.95     1    0    60       90         ? 1,0,50
 9969.05     1    0    50       100        ? 10,0,50
 9969.14     10   0    50       110        ? 30,0,50
 9969.34     30   0    50       120        ? 50,50,50
 9980.46     50   50   50       130        ? 60,50,50
 9980.36     60   50   50       140        ? 50,60,50
 9970.46     50   60   50       150        ? 55,50,50
 9980.41     55   50   50       160        ? 51,49,49
 9918.55     51   49   49       170        ? 50,55,50
 9975.46     50   55   50       180        ? 51,51,51
 9879.45     51   51   51       190        ? 40,50,50
BOOOOOOMMM!!!                        꽝! 대폭발.
YOU BLEW IT. THE BUILDING BLEW UP. 건물은 산산조각이 났읍니다.
THE BOMB WAS LOCATED AT THE COORDINATES(L,W,H): 76  30
   폭탄은 여기에 있읍니다.
```

```
1 PRINT CHR$(26);TAB( 26);"DEFUSE"
2 PRINT TAB( 20);"CREATIVE COMPUTING"
3 PRINT TAB( 18);"MORRISTOWN, NEW JERSEY"
4 PRINT:PRINT:PRINT
10 PRINT "YOU ARE IN A GOVERNMENT EXPERIMENTAL BUILDING WITH"
20 PRINT "1,000,000 ROOMS IN IT.  THE BUILDING IS 100 ROOMS"
30 PRINT "LONG (0-99), 100 ROOMS WIDE (0-99), AND 100 ROOMS HIGH (0-99)."
40 PRINT:PRINT "IN IT A BOMB IS HIDDEN.  THE BOMB SENDS OUT SIGNALS THAT"
50 PRINT "GET STRONGER AS YOU GET CLOSER.  YOU HAVE 200 SECONDS"
60 PRINT "TO DEACTIVATE IT."
70 PRINT:A=INT(100*RND(1)):B=INT(100*RND(1))
80 C=INT(100*RND(1)):IF A>0 THEN 90
85 IF B>0 THEN 90
87 IF C=0 THEN 80
90 D=0:E=0:F=0:G=0
100 PRINT "SIGNAL";TAB( 15);"L";TAB( 20);"W";TAB( 25);"H";
105 PRINT TAB( 35);"SEC";TAB( 50);"COORDINATES (L,W,H)"
106 PRINT "-------";TAB( 14);"---";TAB( 19);"---";TAB( 24);"---";
107 PRINT TAB( 35);"---";TAB( 50);"-------------------"
110 PRINT USING "####.##";10000-ABS((A/100+B+C*100)-(D/100+E+F*100));
111 PU$="###  ###  ###          ###"
112 PRINT TAB( 13);:PRINT USING PU$;D,E,F,G;:PRINT TAB( 50);
120 INPUT D,E,F:G=G+10:IF A<>D THEN 130
125 IF B<>E THEN 130
127 IF C=F THEN 170
130 IF G=200 THEN 140
135 GOTO 180
140 PRINT:PRINT "BOOOOOOMMM!!!":PRINT "YOU BLEW IT.  THE BUILDING BLEW UP."
145 PRINT "THE BOMB WAS LOCATED AT THE COORDINATES (L,W,H):";A;B;C:PRINT
150 PRINT:PRINT "WANT TO PLAY AGAIN";
160 INPUT Z$:IF LEFT$(Z$,1)="Y" THEN 70
165 GOTO 999
170 PRINT "BOMB DEACTIVATED AT";G;"SECONDS!!!":GOTO 150
180 IF D>99 THEN 200
183 IF D<0 THEN 200
185 IF E>99 THEN 200
187 IF E<0 THEN 200
190 IF F>99 THEN 220
195 IF F<0 THEN 230
197 GOTO 110
200 PRINT "YOU WALKED OUT A WINDOW ON THE";:IF F<4 THEN 240
205 PRINT F;"TH FLOOR!!!"
210 PRINT "YOU WERE KILLED AND";200-G;"SECONDS LATER THE BUILDING"
215 PRINT "BLEW UP!!!":GOTO 150
220 PRINT "YOU ARE NOW";F*9;"FEET IN THE AIR!!!":GOTO 210
230 PRINT "YOU ARE NOW";-1*(F*9)"FEET UNDERGROUND!!!":GOTO 210
240 ON F GOTO 250,260,270
250 PRINT " 1ST FLOOR!!!":GOTO 210
260 PRINT " 2ND FLOOR!!!":GOTO 210
270 PRINT " 3RD FLOOR!!!":GOTO 210
999 END
```

Dodgem (도 점)



이 게임은, 1972년에 케임브리지 대학의 학생이 고안한 것인데, Martin Gardner에 의해 Scientific American지에 소개되어 널리 알려지게 되었다. 게임 규칙은 프로그램의 설명(instruction)을 보면 바로 알 수 있을 것이다.

이 게임은, 컴퓨터를 사이에 두고 두 사람이 할 수도 있고, 컴퓨터와 대전할 수도 있다. 이 때 컴퓨터는 의외의 수를 쓸지도 모른다.

This is not surprising since Dodgem was written by the very talented and prolific Mac Oglesby.

```
RUN
                         DODGEM
                   CREATIVE COMPUTING
                  MORRISTOWN  NEW JERSEY


DO YOU WANT INSTRUCTIONS FOR DODGEM? Y  설명이 필요합니까?

HERE'S A SAMPLE PLAYING BOARD:

1 . . . .
2 . . . .
3 . . . .
4 . . . .
. A B C D

TWO SETS OF PIECES (DIGITS AND LETTERS) RACE AT RIGHT ANGLES
ACROSS A SQUARE BOARD. VACANT LOCATIONS ARE SHOWN AS PERIODS.
YOU CHOOSE THE THE BOARD SIZE (THE ONE ABOVE IS SIZE 5.)
  N
  :
W---E
  :
  S

THE OBJECT IS TO MOVE ALL OF YOUR PIECES ACROSS THE BOARD  모든 말을 먼저
AND OFF THE OPPOSITE EDGE. DIGITS LEAVE THE BOARD ONLY AT  반대편으로 옮긴
THE EASTERN EDGE; LETTERS ONLY AT THE NORTHERN. THE WINNER 쪽이 이깁니다.
IS THE PLAYER WHOSE PIECES HAVE ALL LEFT THE BOARD.

THE PLAYERS GO IN TURN, MOVING ONE OF THEIR PIECES TO AN
ADJACENT LOCATON WHICH IS EITHER OFF THE BOARD OF CURRENTLY
VACANT. THERE ARE NO DIAGONAL MOVES, NO JUMPS AND NO CAPTURES. 대각으로
DIGITS CANNOT MOVE WEST, NOR LETTERS MOVE SOUTH.  옮기거나, 뛰어넘지는 못합니다.
 숫자 말을 서쪽으로 문자 말을 남쪽으로 옮기지 못합니다.
TO MOVE A PIECE, TYPE ITS NAME AND THE FIRST LETTER OF THE
DESIRED DIRECTION.  EXAMPLES:  옮길 말과 방향을 입력합니다. 예를 들면……
  2E MEANS THAT PIECE 2 WANTS TO GO EAST
  BW MEANS THAT PIECE B WANTS TO GO WEST.

NOTE: YOU FORFET THE GAME IF YOUR MOVE LEAVES YOUR OPPONENT
WITHOUT ANY LEGAL MOVE.

LASTLY, YOU MAY TYPE R TO RESIGN AND H FOR HELP. 도중에 그만 하고 싶을 때에는 R,
                                                 어찌할지 모르겠으면 H를 입력합니다.
BOARD SIZE (3-6)? 4   화면의 크기는?
HOW MANY PLAYERS (1 OR 2)? 1  몇 사람이서 합니까?
OK, THE COMPUTER WILL MOVE THE DIGITS.
WHO MOVES FIRST (1=COMPUTER, 2=YOU)? 2  누가 먼저합니까?

HERE WE GO... 시작합시다.

 1 . . .
 2 . . .
 3 . . .
 . A B C

LETTERS MOVE? CN       문자 말은?  C를 북쪽으로
THE DIGITS MOVE: 1E    숫자 말은?  1을 동쪽으로

 . 1 . .
 2 . . .
 3 . . C
 . A B .

LETTERS MOVE? AN
THE DIGITS MOVE: 1E

 . . 1 .
 2 . . .
 3 A . C
 . . B .

LETTERS MOVE? CN'
THE DIGITS MOVE: 1E

 . . . 1
 2 . . C
 3 A . .
 . . B .
```

```
LETTERS MOVE? CN
ILLEGAL MOVE OR BAD INPUT.    잘못 움직였거나 입력 실수 !
INPUT IGNORED. TYPE H FOR HELP.
LETTERS MOVE? H
THE LETTERS HAVE THESE LEGAL MOVES:
  AN  AE  BN  BE  BW  CW
LETTERS MOVE? BN
THE DIGITS MOVE: 1E

  .  .  .  .
  2  .  .  C
  3  A  B  .
  .  .  .  .

LETTERS MOVE? AN(
THE DIGITS MOVE: 3E

  .  .  .  .
  2  A  .  C
  .  3  B  .
  .  .  .  .

LETTERS MOVE? CN
THE DIGITS MOVE: 2N

  2  .  .  C
  .  A  .  .
  .  3  B  .
  .  .  .  .

LETTERS MOVE? AN
THE DIGITS MOVE: 2S

  .  A  .  C
  2  .  .  .
  .  3  B  .
  .  .  .  .

LETTERS MOVE? CN
THE DIGITS MOVE: 2E

  .  A  .  .
  .  2  .  .
  .  3  B  .
  .  .  .  .

LETTERS MOVE? BN
THE DIGITS MOVE: 3E

  .  A  .  .
  .  2  B  .
  .  .  3  .
  .  .  .  .

LETTERS MOVE? AN
THE DIGITS MOVE: 3E

  .  .  .  .
  .  2  B  .
  .  .  .  3
  .  .  .  .

LETTERS MOVE? BN
THE DIGITS MOVE: 3E

  .  .  B  .
  .  2  :  .
  .  .  .  .
  .  .  .  .

LETTERS MOVE? BN

*** THE LETTERS WIN!!!  문자 말의 승리 !
OK
```

```
10 PRINT CHR$(26);TAB( 24);"DODGEM"
20 PRINT TAB( 18);"CREATIVE COMPUTING"
30 PRINT TAB( 16);"MORRISTOWN  NEW JERSEY"
40 PRINT:PRINT
240 PRINT "DO YOU WANT INSTRUCTIONS FOR DODGEM";
250 INPUT A$
260 GOSUB 2950
270 IF LEFT$(A$,1) <> "Y" THEN 290
280 GOSUB 3130
290 PRINT:PRINT "BOARD SIZE (3-6)";
300 INPUT A
310 LET A=INT(A)
320 IF (6-A)*(A-3) >= 0 THEN 340
330 GOTO 290
340 LET P(1,0)=A-1:LET P(2,0)=A-1
380 FOR J=1 TO A-1
390 LET P(1,J)=10*J+1
400 NEXT J
420 FOR J=1 TO A-1
430 LET P(2,J)=10*A+J+1
440 NEXT J
460 LET F=1
470 LET M$(1)="NES"
480 LET M$(2)="NE W"
490 LET C$(1)="DIGITS"
500 LET  C$(2)="LETTERS"
510 LET A$(1)="1234567"
520 LET A$(2)="ABCDEFG"
560 FOR J=1 TO A
570 IF J=A THEN 630
580 LET D$(J,1)=CHR$(48+J)
590 FOR K=2 TO A
600 LET D$(J,K)=". "
610 NEXT K
620 GOTO 670
630 LET D$(J,1)=". "
640 FOR K=2 TO A
650 LET D$(J,K)=CHR$(63+K)
660 NEXT K
670 NEXT J
690 PRINT "HOW MANY PLAYERS (1 OR 2)";
700 INPUT B
710 IF B=2 THEN 800
720 IF B=1 THEN 740
730 GOTO 690
740 PRINT "OK, THE COMPUTER WILL MOVE THE DIGITS."
750 PRINT "WHO MOVES FIRST (1=COMPUTER, 2=YOU)";
760 INPUT F
770 IF (2-F)*(1-F)=0 THEN 800
780 PRINT "PLEASE TYPE 1 OR 2. NOW,";
790 GOTO 750
800 PRINT
810 PRINT "HERE WE GO..."
840 PRINT
850 FOR J=1 TO A
860 FOR K=1 TO A
870 PRINT "  ";D$(J,K);
880 NEXT K
890 PRINT
900 NEXT J
910 PRINT
950 FOR J=F TO 3-F STEP 3-2*F
960 REM
980 FOR J1=1 TO A-1
990 LET R=INT(P(J,J1)/10)
1000 LET C=P(J,J1)-10*R
1020 ON J GOTO 1040,1100
1040 IF C=A THEN 1080
1050 IF C > A THEN 1070
1060 GOTO 1160
1070 GOTO 1250
1080 GOTO 1300
1100 IF R=1 THEN 1140
1110 IF R=0 THEN 1130
1120 GOTO 1160
1130 GOTO 1250
1140 GOTO 1300
1160 REM
1165 IF D$(R-1,C)=". " THEN 1240
1170 IF D$(R,C+1)=". " THEN 1240
1180 IF J=2 THEN 1220
1190 IF D$(R+1,C)=". " THEN 1210
1200 GOTO 1250
1210 GOTO 1300
1220 IF D$(R,C-1)=" " THEN 1240
1230 GOTO 1250
1240 GOTO 1300
1245 PRINT "BBS---1245",J1
1250 NEXT J1
1260 PRINT "THE ";C$(3-J);" HAVE NO LEGAL MOVES FOR THE ";C$(J);"!"
1270 PRINT "THE ";C$(J);" WIN!!!"
1280 GOTO 3530'
1300 IF B=2 THEN 1750
1310 IF J=2 THEN 1750
1340 LET L1=2
1350 FOR L0=1 TO 3
1370 ON L0 GOTO 1450,1380,1430
1380 IF RND(1) < .5 THEN 1410
1390 LET L1=1
1400 GOTO 1450
1410 LET L1=3
1420 GOTO 1450
1430 LET L1=4-L1
1450 LET P1=INT(RND(1)*A)
1460 FOR L2=1 TO A-1
1470 LET P1=P1+1
1480 IF P1 <= A-1 THEN 1500
1490 LET P1=P1-(A-1)
1500 LET R=INT(P(J,P1)/10)
1510 LET C=P(J,P1)-10*R
```